

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL  
RAILROAD AND FINANCIAL NEWSPAPER.

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Vol. XVIII  
No. 15.

\$4.00 per year.  
Single Copy  
10 Cents.

Baltimore, November 15, 1890.

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[Continued on Page 77.]



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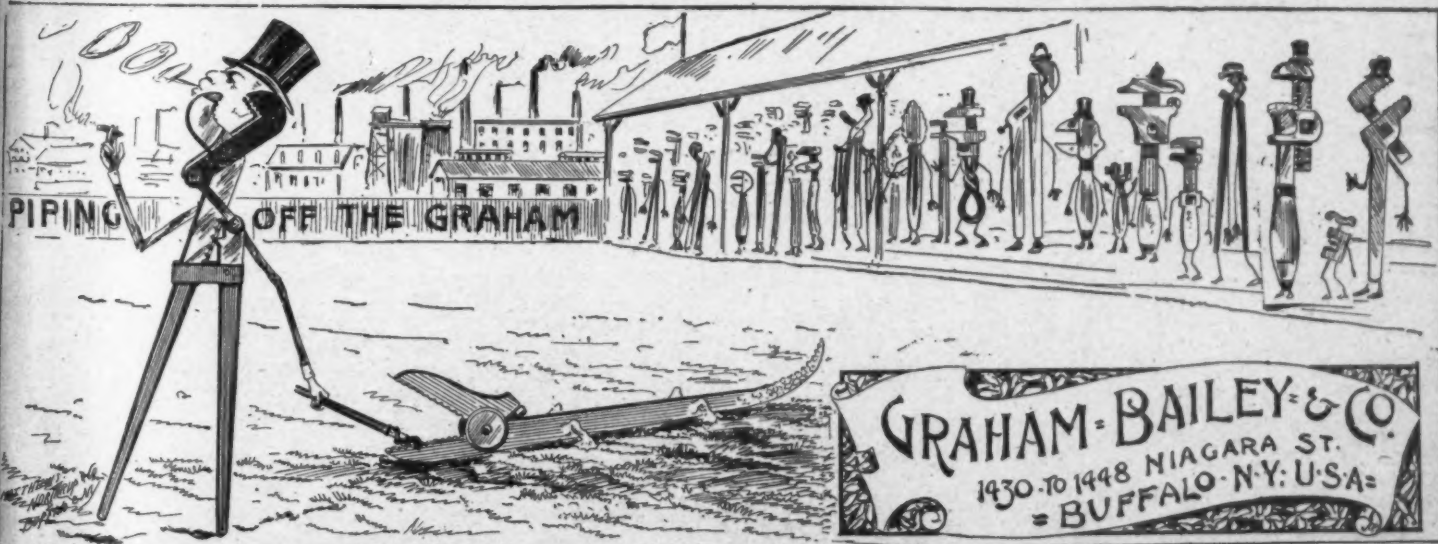
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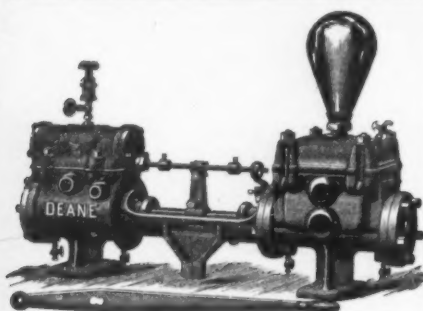
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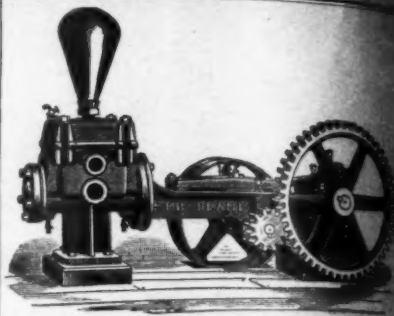
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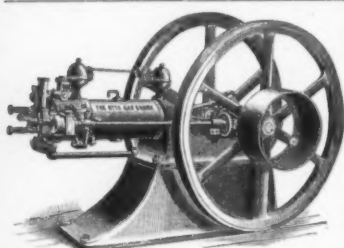
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# MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

VOL. XVIII. No. 15.  
WEEKLY.

BALTIMORE, NOVEMBER 15, 1890.

\$4.00 A YEAR.  
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## Manufacturers' Record.

PUBLISHED EVERY SATURDAY BY THE  
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President, Secretary and Treasurer,  
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RICHARD H. EDMONDS, EDITOR.  
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BALTIMORE, NOVEMBER 15, 1890.

THE story of the rise and progress of Durham, N. C., as narrated in another column, is one of those wonderful histories of Southern development of which this period is most prolific. It really seems like a tale of romance rather than a relation of actual facts. That they are facts the world at large must know, for the pictures of Blackwell's Durham bull have been painted on European and Australian rocks, and the smoke of Durham tobacco rises in every land. The success predicted for the Durham Consolidated Land & Improvement Co. will not be doubted by any who know the advantages and resources of the town and the high character of the management.

THE largest manufactory of baskets in the world is located in the interior of New England. Its products go to all parts of the South. The chief materials employed are splints of oak wood, although bamboo and rattan are largely used. A car-load of truckers' baskets, packed with the closest economy of space, represents only a value to the manufacturer of \$1,000. How much better it would be for that basket-house if it were located in the South, or at least if it had in the South a branch establishment for making all the baskets now purchased by its customers of that section. It would be a saving of cost in raw materials, of labor and of transportation, which three savings would amount to a very handsome profit. Considerations such as these are inducing Northern manufacturers to seek Southern locations for their industries.

## The South and the World's Fair.

The Columbian Exposition at Chicago in 1893 is a certainty. The people of that city—by a vote nearly unanimous—approved the issue of \$5,000,000 of bonds, which will double the amount of their subscription. The placing of these bonds has already been negotiated, and as soon as they can be prepared the money will be forthcoming. In a few days the national commission will assemble and notify the President of the United States that all the conditions demanded in the act of Congress creating the exposition have been complied with. The President will, as required by the same law, send officially to the rulers of all nations, inviting governments and peoples to participate. With these preliminaries the curtain falls upon the first act of this splendid international drama. Before it rises upon the second a vast amount of preparation must be done, and a great deal of money must be expended. Manufacturers and merchants, not only in the United States but throughout the world, will do their parts gladly. But how, about our States, and especially our Southern States? California expects to spend from a quarter to a half million dollars. Washington, the new State of the extreme Northwest, will follow her closely in liberality. The States of the great West generally will be lavish in outlays that they expect will be repaid a thousand-fold in results. What will the Southern States do? Most of their legislatures will soon be in session. They must make the appropriations requisite for suitable representations at the Columbian Exposition. If they do, the South will be able to show the world an exhibit of unequalled natural resources that will attract money by the millions and enterprises by the thousands to her respective States. It is for the legislatures to decide, but they will take no action unless an aroused public sentiment demands it. There is no doubt of the existence

of such a public opinion throughout the South, but it must be expressed in unmistakable terms. Here is work for the Southern press, always earnest in whatever cause it espouses, and always a power in influencing legislation. The time is short. Let the good work begin at once.

## The Real Trouble at Anniston.

The Woodstock Iron Co.'s coke furnaces have suspended operations. They were banked for a year, and no one knows how much longer. The present state of the iron market will not justify the company in running them, and as the matter now stands coke iron will have to command a large price before they will again be put into operation. During the close down the new engine will be put in and the furnace given the needed repairs.

Commenting on the above item, which was first published in the Anniston Hot Blast, the Roanoke (Va.) Times says that for 18 months past some papers "have given the public glowing accounts of what those two furnaces were going to do. When completed, vast stores of high grade iron ores close at hand, first-class coke, and hardly a chance for anybody else when they got going." And then the Times adds that it has information that "there is a very serious question as to the supply of ores" with these furnaces.

In justice to the splendid iron resources of Calhoun county, in which Anniston is located, as well as to all Alabama, the facts in this case ought to be made public. That one of the Woodstock coke furnaces has suspended operations is true. We believe that the other never went into blast. The truth of the whole matter is this: The two charcoal furnaces at Anniston—one built about 1873 and the other in 1879—have made enormous profits. In 1886 the Woodstock Co. decided to build two coke furnaces of 150 tons daily capacity each. The late Mr. Samuel Noble, the general manager, had proved a consummate genius in the development of Anniston and in the management of the two charcoal furnaces, but at the critical time in the history of his company he made a serious blunder that has proved very disastrous. For

the sake of local pride he decided that these two great furnaces should be built exclusively at home, and he gave contracts for five 900 horsepower engines, boilers and other machinery to a local machine shop that was entirely without adequate facilities to handle such gigantic work. Other contracts equally as unwise were made. The result was that these two furnaces which ought to have been completed within twelve or fifteen months were under construction for over three years, and we believe cost fully \$100,000 or \$150,000 more than the original estimate. The greatest cost, however, was in these three years of delay, and then when finished to find that they needed to be rebuilt. One was put in blast and ran a few months very unsatisfactorily, and the other, we believe, was never even blown in. It was found, however, that it was worse than folly to run them as they stood even if they could have had the ore dumped from the mine directly into the stack, and so it became necessary to take out the engine equipment and put in new engines, the contract having been awarded, we understand, to a Milwaukee company.

It is not a question of ore. Calhoun county is one of the richest mineral districts of the entire South. The writer could guarantee to show enough high-grade ore, running from 50 to 55 and 58 per cent. metallic iron, within a radius of 10 to 20 miles of Anniston, to run every furnace in Alabama for years to come. Ten miles from Anniston, surrounding the town of Tredegar, is one of the richest iron ore districts in America, and ore can be mined at a minimum cost within half a mile of the town. Anniston controls immense ore resources as well as an abundance of fine coking coal, but even these superior advantages will not enable furnaces built as the two coke furnaces at Anniston were to run profitably. The MANUFACTURERS' RECORD feels sure that when reconstructed and again put into blast these furnaces will make money even when iron is much lower than it now is, should it ever reach such a point.

### Muscle Shoals Canal

From Chattanooga to Paducah, Ky., the Tennessee river is open to continuous navigation. The long-time obstacle to this desirable attainment has been overcome by the completion of the Muscle Shoals Canal, and while this paper is going to press the people of Chattanooga and the Tennessee valley are preparing to celebrate the fulfillment of a long-cherished hope.

The story of the work now accomplished began in 1824, when Hon. John C. Calhoun, then Secretary of War, referred in an official report to a canal around Muscle Shoals as "third in rank among proposed improvements of national importance." In 1828 surveys were made to determine the practicability and the cost of constructing such a canal, and Congress donated 400,000 acres of public land to the State of Alabama, which had agreed to do the work. The records of that attempt show that after some progress had been made in carrying out the original plan it was thought expedient to modify it in many important particulars. The result was unsatisfactory, and soon after the canal was opened it fell into disuse.

During the campaigns from 1861 to 1865 the importance of opening up the Tennessee to steamboat navigation was made apparent to army officers on both sides of the contest, and when in 1867 an examination of the river from Chattanooga to Paducah was made, there was a strong public sentiment west of the Alleghenies in favor of such an improvement, and this was strengthened by numerous men of influence in the Atlantic States. In 1872 an instrumental survey of the Muscle Shoals was completed, and on this the plan was devised which, except some few changes in the "Elk River Division," has been closely adhered to. This plan was to enlarge and rebuild the old canal (14½ miles long) around Muscle Shoals, to extend it eight miles around the Elk River Shoals, and from thence to carry it five miles around Little Muscle Shoals, and to remove a number of minor obstructions in the river both above and below these greater ones. The entire length of these obstructions was 23 miles. The estimated cost of the completed work was \$4,133,000. It was thought that if Congress would appropriate half a million dollars annually for this improvement, it could be completed in eight years, and events have demonstrated the correctness of the engineer's estimates. But Congress, season after season, following its usual dilatory and cheese-paring course in such matters, made small appropriations, in several instances so meagre that no work was done on the canal for an entire season, and thus the completion of this important improvement was delayed, to the great annoyance of the people of Alabama, Tennessee and Kentucky, and at a

considerable enhancement of the final cost of the work.

The removal of this obstruction to navigation now affords a continuous waterway for light draft steamboats from the head of navigation on the Tennessee, 367 miles above the Muscle Shoals, down to the mouth of that river at Paducah, Ky., 278 miles, making a total of 645 miles of navigable water on the main stream, besides other hundreds of miles on its navigable tributaries. Other appropriations will be necessary for the completion of incidental work and for the pay of care-takers and repairers, but the main thing has been accomplished. This consists of the construction of one canal having 9 locks, with a total lift of 85 feet; of an aqueduct 900 feet long and 60 feet wide over Shoal creek; of numerous permanent dams and bridges over the several creeks and ravines; of a shorter canal around Elk Shoals, with lifts of 12 and 9 feet; of a channel blasted through the solid bed-rock of the river at Little Muscle Shoals, with strong wing dams and retaining walls to contract the waterway and to check the velocity of the current; and finally, of the removal of snags, sand bars, boulders and other obstructions above Decatur and below Florence, Ala. The canal trunk is from 70 to 120 feet wide at the water surface, and 6 feet deep. All the locks are 300 feet long, 60 feet wide, and have a depth of 5 feet of water on the miter sills. The walls are of solid masonry, and all the materials employed in constructing the gates, the bridges and other essential appliances were the best that could be procured. This great work, as a whole and in all its parts, is of the most substantial kind, and with ordinary attention and care will outlast many generations.

The annual reports of the three army engineers who have respectively superintended this improvement from its beginning to its completion give the progress of the work with that succinct clearness that characterizes the writings of that class of public servants. In reading them one is compelled to admire the ingenuity constantly exercised in overcoming obstacles and in devising machines, tools and appliances for the better and more economic prosecution of the work. To Major Walter McFarland, Major W. R. King and Lieut.-Col. J. W. Barlow, all officers of the engineer corps of the United States army, the thanks of the people of the Tennessee valley and of the country at large are due for the admirable manner in which they respectively performed their duties while in charge of this improvement.

The work on this part of the Tennessee river was but one of many important improvements the government has undertaken in Kentucky and Tennessee. Among the rivers embraced in the district in charge of Colonel Barlow are the French

Broad, Little Tennessee, Hiwassee, Clinch, Duck, Cumberland and several tributaries, Caney Fork and Holton. From all these obstructions to navigation are to be removed, and in doing this the way is cleared for a more rapid flow of their currents, and consequently in times of high water, a much greater volume will be poured into the Mississippi. The more the tributary streams of the "father of waters" have their flow accelerated by such improvements, the greater the volume that that stream must carry to the sea. Every such improvement is an argument for greater speed in completing work on the Mississippi, and enabling it to bear its additional burdens safely.

THE great number of daily real estate transactions in the South have brought to the MANUFACTURERS' RECORD requests like the following, which comes from Lexington, Va.: "Will you please state through your columns what are the names of the best systems of 'title abstract,' and where can information be had concerning them." We should be glad to comply with these requests were there any such things attainable, but from the best authorities we learn that there is no general system. Every State has its own peculiar laws affecting land titles; every conveyancer has his own system of keeping title abstracts; every lawyer having much to do with land transactions has his individual methods. There is no general rule to guide the conveyancer or the title searcher. Each must exercise his own ingenuity with no other guide than the laws of the State in which the property is. There are, however, in many cities title insurance and trust companies. These are chartered corporations with substantial capital. Most of them own plants consisting of books of maps. Every page is a map of a block; every lot of that block is measured by a first-class surveyor, and his measurement is recorded. In accompanying books are abstract titles that show the status of every piece of ground from the earliest date. Every transaction in real estate in that city is copied from the official records as soon as it is made and added to the title insurance company's. When a person bargains for a piece of property, before completing the transaction he goes to one of these companies, and, by the payment of a small fee, he secures an abstract or guarantee of title. This insurance is perpetual to a purchaser or his heirs, though the premium is payable but once. This gives ease and cheapness to future transfers, subsequent purchases being reinsured at a nominal rate. It is a business method and a great saving of time. Most of these companies loan on mortgage such reasonable amounts as may be needed to complete a purchase. This business has been found useful to the community and very profitable to the corporations. It would be well if some such institution were established in every growing Southern city.

### Site-Seeking Foreigners.

Our Northern exchanges every day contain notices of foreign manufacturers who are seeking suitable sites for the establishment of branch industrial establishments in this country. The following clippings, in the form of specials to three different papers, were handed in by one of our exchange readers in a single forenoon:

SCRANTON, PA.—R. Martin, of New York, representing the Nottingham (Eng.) lace firm of Wooten, Mosely & Clifton, was in this city to-day completing arrangements for the location of a large lace factory here. It will have a capital stock of \$300,000, and will manufacture annually \$500,000 worth of lace. Work on the factory will be begun about January 1. The Nottingham firm will have a controlling interest, the rest being sold to Scranton, New York, Chicago and St. Louis capitalists. Mr. Martin said that the passage of the McKinley tariff bill made it absolutely necessary for his firm to establish a manufactory in the United States.

PROVIDENCE.—Representatives of a Bradford (Eng.) syndicate are in this city, and are looking over several roller mills in the State with an object of purchasing them if they can be obtained at favorable prices. There are four mills under consideration: Geneva worsted mill, of this city, 9 sets; Lymanville worsted mills, 14 sets; Kimball's cassimere mill at Manton, 7 sets, and the Harrisville worsted mills, 10 sets. The owner of the last-named plant has negotiated to some extent with the Englishmen, who have visited Harrisville and inspected the mills there. Although nothing definite has been done, it is probable that some offer will be made, as Bradford manufacturers have felt the effect of the McKinley bill very severely.

PHILADELPHIA.—The agents of a French syndicate who have been negotiating for the purchase of a site on which to erect a monster silk mill, have secured an option on the valuable stock farm owned by Robert Steel at Germantown. The option holds good, it is said, until February next, and will probably be followed by a sale. The farm was thoroughly inspected by the agents, who, Mr. Steel says, were perfectly satisfied that the site was well adapted for the purposes of the silk industry. The most satisfactory feature to them, it appeared, was the water, it being of the desired quality to be utilized in the manufacture of silk. The syndicate, it is said, has a capital of several million dollars, and will commence the manufacture of silk upon an unusually extensive basis. If the plans go through, it is announced they intend to erect one of the largest silk mills in the world, and will employ about 4,000 hands.

We have but recently called attention to the number of representatives of foreign manufacturers who were in this country seeking sites, and have urged our Southern friends to unite upon some plan that would call their attention to the superior advantages of the South for such plants as they propose to construct.

Whatever views any of us may entertain concerning the McKinley bill, one thing is certain—this class of men are coming to the United States to establish their industries. The South needs them, and needs them very much, to diversify her industries, which are far from numerous enough to employ her idle labor and to utilize her abundant resources.

Political agitation has gone by for a season, for which let us be thankful. It will be wise to exert our influence to secure a share of this inflowing tide of industries from Europe.



### The Tax on Tin Plate.

Since the first of October complaints have been made, and justly so, of the advanced prices charged for roofing tin. The pretext assigned for this advance is the tax imposed by the new tariff law. We say *pretext* advisedly, for the charges alleged to have been made are, in many instances mentioned in our exchanges, much higher than the additional tax would justify. The law applying to tin plates is as follows:

On and after July 1, 1891, all iron or steel sheets or plates or taggers iron coated with tin or lead or with a mixture of which these metals or either of them is a component part, by the dipping or any other process, and commercially known as tin plates, terne plates and taggers tin, shall pay two and two-tenths cents per pound; provided, that on and after July 1, 1891, manufactures of which tin, tin plates, terne plates, taggers tin, or either of them, are component materials of chief value, and all articles, vessels or wares manufactured, stamped or drawn from sheet iron or sheet steel, such material being the component of chief value, and coated wholly or in part with tin or lead or a mixture of which these metals or either of them is a component part, shall pay a duty of 55 per centum ad valorem; provided further, that on and after October 1, 1897, tin plates and terne plates lighter in weight than 63 pounds per hundred square feet shall be admitted free of duty, unless it shall be made to appear to the satisfaction of the President (who shall thereupon by proclamation make known the fact) that the aggregate quantity of such plates lighter than 63 pounds per 100 square feet produced in the United States during either of the six years next preceding June 30th, 1897, has equaled one-third the amount of such plates imported and entered for consumption during any fiscal year after the passage of this act, and prior to said October 1st, 1897; provided, that the amount of such plates manufactured into articles exported, and upon which a drawback shall be paid, shall not be included in ascertaining the amount of such importations; and provided further, that the amount or weight of sheet iron or sheet steel manufactured in the United States and applied or wrought in the manufacture of articles or wares tinned or terne-plated in the United States, with weight allowance as sold to manufacturers or others, shall be considered as tin and terne plates produced in the United States within the meaning of this act.

Such is the law. Its obvious intention is to encourage the production of tin plate of all kinds in the United States. Before such plate can be made here rolling mills and machinery costing very large sums must be built. The capital invested in a 125 ton furnace and its accessories would be \$185,000. To carry on the business after the plant is ready would require \$55,000 working capital. The total amount needed for all purposes, including the above, would be at least \$250,000.

Capital is proverbially timid. It cannot be obtained for uncertain industrial undertakings. It must have a reasonable assurance of stability of markets and of fair profits. This has not been the case heretofore. The great British concerns, with plants and ready money sufficient for all needs, could afford to flood this country with tin plate (as they did once before), paying the old duty of 1 1-10

cents a pound, and undersell American mills were there a number of them competing with each other in the home market. That competition destroyed, up prices would go again, while our American tin plate mills would stand idle.

During the fiscal year ending June 30, 1867, this country consumed 4,000,000 boxes, or 200,000 tons of tin plate. To make this quantity there were required 260,000 tons of pig iron, 1,000,000 tons of coal, 4,000,000 bushels of charcoal, 30,000,000 pounds of sulphuric acid, 3,500,000 pounds of lead, 20,000,000 feet of lumber and large quantities of tallow, lubricating oil and other incidentals of the business. Tin to the extent of 22,000,000 pounds would have been used. The tin mills would have employed 15,000 people, through the year, whose wages would have amounted to \$11,600,000.

It will be noted that every material named in this list—tin only excepted—could have been supplied in this country, and would by so much have increased the demand for lumbermen, miners and other wage-earners. As for tin, we should have done what England does. Her Cornwall mines supply but a small part of the metal consumed in the tin mills. By far the larger proportion is imported from other countries. The design of the tin plate schedule of the new tariff bill needs no other argument than the foregoing list of materials. It is intended to make an increased market for them. This is further shown by another clause in the same bill. In that already quoted the new duty does not go into effect until the first of next July, and provision is made for the repeal of the law after a certain time if it has not developed this industry in the United States. But section 145 specifically directs that between the passage of the bill and July 1, 1891, the duty shall be but one cent a pound.

This gives to importers nearly nine months in which to lay in stocks sufficient for all emergencies at that low duty. The advance complained of was therefore uncalled for. The dealers found that their customers were uninformed, and they forced them into paying outrageous prices and threw the blame upon a measure that had real faults enough without making it a scarecrow for extortion.

Another intention of this law is to induce American prospectors to hunt for and capitalists to develop tin mines. Not as much attention has been given to searching for this metal as recent discoveries would seem to warrant. It is known that tin ores have been found in the West and in Virginia, Kentucky and North Carolina. The unscientific prospector would not know tin ore if he were to run across it. Iron, copper, gold, silver, lead ores he knows, but cassiterite or black oxide of tin is an unknown metal. Section 209 of the tariff act says:

On and after July 1, 1893, there shall be

imposed and paid upon cassiterite or black oxide of tin, and upon bar, block and pig tin, a duty of four cents per pound; provided, that unless it shall be made to appear to the satisfaction of the President of the United States (who shall make known the fact by proclamation) that the product of the mines of the United States shall have exceeded 5,000 tons of cassiterite and bar, block and pig tin in any one year prior to July 1, 1895, then all imported cassiterite, bar, block and pig tin shall, after July 1, 1895, be admitted free of duty.

Clearly here is the same well-defined policy. If we have tin ores in abundance in this country, as many claim, two years are given in which to find and develop them before a duty is imposed. Meanwhile all tin plate makers may get their supply of pig tin from abroad. Between July, 1893, and July, 1895, a duty of four cents a pound is imposed, and if by that time it has been ascertained that these expectations of a home supply were baseless, the President is instructed to proclaim the duty abolished.

Such are the facts about the "tax on tin plate." It is simply a carefully guarded effort to establish a new industry that will make this country as independent of the world in the supply of this article as it has already become independent of foreign iron makers. In a letter on this subject addressed to the editor of the MANUFACTURERS' RECORD, Mr. Henry Kelly, F. A. A., (now of Philadelphia, formerly with a firm of specialists in London and Swansea who were auditors of tin plate manufacturing company's accounts), uses the following language:

I desire to say as a business man and expert accountant unbiassed by political considerations that in my mind there is no doubt whatever as to the expediency of this country (U. S.) manufacturing its own tin plate, looking at the large consumption in the country (\$30,000,000 annual value) and the possibility (if not probability) that at some future time there may be a difficulty to obtain it so as to supply the regular demand. European wars or other causes might interfere. I hold from a business standpoint that this country should, if possible, produce everything that it consumes. That tin plate can be produced and marketed here (U. S.) not only on the above lines, but eventually to the great benefit of the consumer, I have not the least doubt, and this I say advisedly, not reckoning in my mind tin on the spot mined from any part of the United States.

BASIC CITY, VA., will celebrate its transformation from farm lands to a prosperous industrial center by a second auction sale of lots, December 3d and 4th. The promises of the company, that caused the success of the first sale early last summer, have been kept in both letter and spirit; the town has developed faster than its conservative promoters dared to predict. The public, fully advised of these facts, will gladly accept this coming opportunity to invest there.

*If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year, or six months for \$2.00.*

### Gun-Making in the South.

Some time between the middle and last of this month a board of military officers, acting under orders of the Secretary of War, will visit Birmingham, Ala., that city having been selected because of its fame as an iron producer, and because of its central position among the cities of the Gulf States. These officers will have been to Indianapolis, to Rock Island, to the three Pacific States—Washington, Oregon and California—before going to Birmingham. Their mission is set forth in an act of Congress, approved August 18, 1890, as follows:

The President is hereby authorized to appoint a board to consist of three officers of the army, one of engineers, one of artillery and one of ordnance, not below the rank of lieutenant-colonel, who shall inquire into the facilities for producing steel forgings for high-power guns at or near the Pacific coast, and in the vicinity of Rock Island arsenal, and in the vicinity of Indianapolis arsenal, and at some point on or near the Gulf coast, and the advisability of erecting gun factories for finishing and assembling high-power guns, to be mounted in fortifications, at the Benecia arsenal, in California, or at the Rock Island arsenal, or at the Indianapolis arsenal, or at some point on or near the Gulf coast.

Said board shall also examine and report as to the capacity, cost of erection and equipment of such gun factories.

Before leaving New York a circular letter was prepared by Major Clarence E. Dutton, recorder of the board, setting forth the purposes of the proposed investigation and containing many instructive suggestions that would enable all interested in the subject to collect whatever information was attainable that would facilitate the work of the board. The authorities and leading citizens of Birmingham, Augusta and some other places in the Gulf States have been for several weeks busy in preparing statements backed by statistics to show how nearly they can approach to the varied requirements for a location for the immense gun-making works the government proposes to build. A review of these many and various essentials is sufficient to show that there is no place in the South that combines them all, while there are many that have a sufficient number of the requisites to make them worthy competitors with a fair showing for ultimate success.

Two distinct establishments are to be constructed: 1st—One for making the masses of forged steel, roughly shaped to the required dimensions. 2d—A factory for boring, turning, finishing and assembling the several parts into the completed gun. Of the steel foundry and forge Major Dutton says:

The forgings for heavy guns are all very large, those for the tubes and jackets being much the largest produced in the art. In the 12-inch rifle the rough tube weighs about fourteen and one-half gross tons and the jacket thirteen tons. The metal is a "low steel" of the highest degree of purity. The requirements as to the physical properties of the metal are exceedingly exacting and have taxed to the uttermost the skill and resources of the steel makers. Different qualities are pre-

scribed for different pieces, but for corresponding pieces great uniformity, as shown in the test specimens, is required. Comparatively few ores are known which yield a metal sufficiently free from injurious ingredients, and these must be smelted with fuels and fluxes equally free from such ingredients. Hence it is important that the steel works should be situated in a locality where such ores, fuels and fluxes abound, or to which they can be brought without excessive expense for transportation. Ores which are very exceptionally free from phosphorus, sulphur and titanium are absolutely necessary. If such ores are magnetites, more tractable ores of equal purity are needed to mix with them. The best fuel is usually charcoal, if it can be obtained with sufficient cheapness, but some coals and anthracites will answer. Iron obtained by "direct processes" in the form of blooms will be suitable if free from injurious impurities.

After describing with considerable detail the massive machinery employed in the various processes the writer says:

The cost of an establishment equipped with such machinery may be estimated at \$2,500,000 to \$3,500,000, according to varying circumstances and conditions. It is governed not only by the cost of labor, material, equipment, etc., but also the amount of accessory plant which it would be necessary to create, such as blast furnaces, machine shops, shipping and receiving facilities. The output of such an establishment may be estimated at from 30 to 40, or say 35 sets of forgings for 12-inch guns per annum, and a correspondingly larger number of smaller calibers, though this might be increased by the addition of a number of the great lathes required for boring the tubes and jackets.

The gun factories will require machines of the highest precision, for "the workmanship of the high power steel gun demands about as much precision as that of a great telescope," for without it the gun would be unsafe.

"For work of this character," says Major Dutton, "machine tools of an exceptional class are required, as well as workmen of the highest skill. From \$600,000 to \$800,000 worth of machine tools are required to equip a shop with a capacity of 15 or 20 12-inch guns per year, and the building to contain them, together with its steam power, traveling cranes and other fixtures, would require from \$300,000 to \$350,000 more. Accessory plant, buildings and tools would also be needed, the extent of which cannot be estimated here."

Other essentials would be shops for the manufacture of gun carriages, and a proving ground where the guns could be tested with service charges and projectiles. The latter must be a level range several miles long, so situated as to surrounding population that neither life nor property would be endangered.

"The foundry and the factory should be situated at points out of reach of guns from hostile ships of war, and where they are not liable to be destroyed by a sudden incursion of an unexpected enemy. Facilities for shipment both by land and water are desirable, and excellent railway facilities are imperative. Since the weight of a 14-inch gun is about 52 gross tons, and the car upon which it must be transported to tidewater is of exceptional strength and weight, the permanent way, bridges and trestles of the railway lines over which it must pass must be free from all doubts as to their stability."

Following the general statement of which the foregoing is but a sum-

mary, Major Dutton furnishes in detail the information desired by the board. The first essential is the supply of ores suitable for steel production. These are classified as follows:

1. Ores. What iron ores can be relied on to supply an establishment making low steel? Where are the ore beds situated? Have any of them been used successfully and extensively for this purpose? And if so, for what classes of steel have they been used, whether for tool, structural, Bessemer, machinery or railway steel? If the ore beds are well known to the steel trade and manufacture it will suffice to name them. In case they have not been so used extensively, but are believed to be capable of it in future developments, it is desirable to state the grounds of this belief, and to mention the results of preliminary trials of the ores, if any have been had, and the results of chemical analysis, giving the names of the analysts.

2. How are such ore beds situated with reference, first, to any proposed site for a steel foundry or to the city in which you reside; how far distant, and what are the means of transportation? Second, to the fuels by which they can be smelted; and what amount or kind of transportation will be required to bring the fuel and ore together.

3. What source of supply of spiegeleisen or ferro-manganese will have to be relied on? Are any deposits of manganese or pyrolusite known in your vicinity?

4. Are materials for making refractory fire-brick known in your vicinity, and are any such brick made there? If so, full information concerning them is desirable, also concerning fire-clays, furnace linings, molding-earths and similar materials.

5. Information is sought concerning the fuels which must be used. In case natural gas occurs, a comparison with the yield of the gas wells in other localities would be instructive. In case of bituminous coals, information as to the extent of the beds, their situation, the extent to which they have been developed, the output, the conditions of mining, and the quality of the fuel, especially with reference to coking, and its contents of sulphur and phosphorus, is desirable.

On all these points the South can satisfy the board. If no one locality can furnish every item of this schedule, yet, because of improved railway connections, they can all be assembled at whatever place shall finally be selected with an economy of cost surpassing any other section of the country.

The industrial resources of the region surrounding the site will have an important bearing on the final choice. Referring to this the circular says:

A general review and perhaps a moderately detailed statement in some cases may be advisable, showing the extent of those industries which must be relied upon to furnish a steel foundry or gun factory with its current supplies, its materials for construction, repairs, and maintenance; also showing the ability of local shops or factories to furnish special castings, wrought-iron or steel parts, often of large size, and upon short notice. The extent to which the contemplated steel works or factory must rely upon its own resources to keep going, or may depend upon local establishments for co-operation, will obviously be governed largely by the extent to which the local industries are developed. It takes a machine shop to build a machine shop, and it becomes a primary question how far the establishments should be dependent upon the local industries and how far they

should be independent or self-dependent. In those cities which possess large, numerous and varied establishments of national repute a mere mention of them will suffice. In other localities it would be well to state particular machine shops, the sizes and natures of their more important machine tools and their general capacity to do work.

Facilities for obtaining structural iron and steel for the building of such works should be shown, especially for the procurement of iron columns, rolled beams, roof trusses of large span; also large steam boilers and iron stacks, plate iron, angle iron and shafting, pipes and mains, heavy castings.

The ability of the local trades to do occasional jobs of fine machine work in iron, steel or bronze might be stated.

These great plants the government proposes to establish somewhere in the Gulf States, and altogether if possible. If not, then the foundry and forge may go to one, and the gun factory with its auxiliary shops to another. Wherever these mammoth plants shall be erected, either apart or together, there will be a center of industrial activity unlike any other in the South. The consumption of fuel and ore will be enormous, the number of mechanics of the highest skill will be great, and because these shops will have to be supplied constantly with tools and appliances not made in them, other industries will spring up in their vicinity and create a great manufacturing city. The prize is the greatest of any yet offered for competition to the South's live places.

REPORTS of the progress of the Nicaragua canal are most encouraging. The contrast presented between American endeavor in this enterprise and the notable De Lesseps failure is most marked. Recent advices are that the Nicaraguan Minister of Public Works, Senor Don J. F. Medina, has, on behalf of his government, congratulated Mr. Henry C. Hall, resident general manager of the Maritime Canal Co., that his company has more than fulfilled its contract in money expended and work accomplished. The company has now, by the terms of the concession, ten years in which to complete the canal. Two items in this report are worthy of special note. One is that there has not been a single death in the entire force of 1,500 employees from any febrile or enteric disorder. The other is that several million feet of lumber have already been received at San Juan del Norte from Atlantic and Gulf ports, and that other cargoes are arriving daily. This great maritime enterprise will not only continue to buy large quantities of lumber from Gulf mills during the progress of the work, but when it shall have been completed, the profitable markets of the Pacific coast, of South America, of the Sandwich Islands and of Eastern Asia, all of which are enormous consumers of Puget Sound lumber, will be open to the Gulf State mills.

FOR fifty-four years "Turner's Almanac" has been published in North Carolina, and during that time it has gained such repute for accuracy of calculations, for correct weather guesses, for wise advice about seed time and harvest, for historic records and for its summaries of the preceding year's events as to make it an annual necessity, and second only to the Bible as a reference book in the estimation of the Tar Heels from the Unaka mountains to the seacoast. A copy for 1891 received from James H. Ennis, publisher, Raleigh, is acknowledged.

## A Baltimore Estimate of Southern Progress.

THE MANUFACTURERS' RECORD is able to give herewith what may properly be termed a representative Baltimore view of the development in the Southern Appalachian region. This was the subject of an interview had with a gentleman prominent in business and financial circles of Baltimore just returned from a round trip of the South, taken for the purpose of making a personal examination of the growth and advancement reported from week to week in the MANUFACTURERS' RECORD. The estimate placed upon the Southern movement by a man trained to strict, careful and conservative methods after a tour which included the principal points between Shenandoah Junction and Birmingham will be received with unusual interest and, in this case, gratification. The verdict is: "It is a sound movement, resting on a solid basis. It is not going too fast, so far as industrial development is concerned; on the contrary, it seems to me to be hardly yet begun. My conclusion is that high-water mark will be reached only when the resources are fully utilized, and that time is far distant. What has already been done seems but preliminary to the great development which is coming. I was surprised at the evidences of a many-sided prosperity which I witnessed on my journey down on one side of the mountains and back on the other. Industries and agriculture flourish side by side. Everywhere I found good times and busy people."

My trip began with the Roanoke excursion, which left Baltimore October 16. Accompanied by a friend, I proceeded thence to Knoxville, which we found a beautiful and busy place. It is substantially built, has a fine territory and a good trade, and is enjoying a healthful growth. It came within my knowledge that the stock of one real estate company there was worth four for one.

We then went to Middlesborough, our trip giving us a chance to look at some of the most beautiful scenery I ever saw. I was especially struck with the picturesque appearance of some of the natives who stood round the railway stations, their wide-brimmed white hats, top boots and unkempt locks suggesting mountain civilization of Italy or Spain. Sharply in contrast with the sleepy world of these curious mountaineers is the busy and modern town of Middlesborough. We were very much impressed with the activity and solidity of this city which English money and American energy are building in Southeastern Kentucky. Returning to Knoxville we proceeded by way of Chattanooga to Birmingham, which we found to be a very busy city, boasting of 28 furnaces. We spent a day or two at a charming hotel in the beautiful little city of Anniston, and saw the outside of most of the industries, though we did not go through them.

### IMPRESSIONS OF TREDEGAR.

From Anniston we went to Tredegar, which is still known in postoffice guides and on railroad time-tables as Jacksonville, Ala., with which we were more pleased than any other point visited during our trip. I have never seen a place, outside of Baltimore, I would prefer to Tredegar as a place of residence. The climate is so delightful that we hated to go to bed and sleep away any of the time allotted to our stay there. I learned that the weather was not at any time very cold, and that the temperature was never above 90 in midsummer. Nature has made a site for a city at Tredegar. The lay of the place is perfect, requiring little or no grading for streets, and affording perfect drainage. A half dozen big springs give a water supply adequate to the needs of a city. It is a town of about 3,000 inhabitants now, but the industries building will, of course, increase the population, and new people are coming in anti-



cipation of this growth. The old part of the town is ideally Southern in its fine, comfortable homes and broad streets."

"What is the basis of Tredegar's growth?"

"I am not a mineral expert, but I saw every evidence of wonderful resources in and around Tredegar. We were shown openings at the base, in the center and on top of a mountain which seems almost solid manganese. On top of the mountain there is a head of manganese ten or twelve feet square. We also saw immense deposits of bauxite, a very valuable material for lining furnaces, which has heretofore been obtainable only in foreign countries. It looked to me as if there was a sufficient quantity of bauxite in the Tredegar deposit to line all the furnaces in America for an indefinite period."

"Is there an abundant supply of iron ore at Tredegar?"

"We had time to examine only the brown hematite openings, though there are beds of red hematite, reported to be inexhaustible, near to Tredegar and owned by the company. We visited one fine show of brown ore near to the city and the next day drove out to the Butler-Green deposit, six miles distant. A gravity railroad is practicable for getting this ore to the furnace at Tredegar. We walked over ore for three hours. There seemed no end to it. In this property there is a vein of ore from 120 to 160 feet wide, running for several miles. Experts report that in this property alone there is enough high-grade ore to run many furnaces for generations to come, though this is only one of the iron properties owned by Tredegar people. An evidence of the future prospects of Tredegar is the great need for houses, which are not being built fast enough to accommodate the inflow of population. The basis upon which the Tredegar people are building seems ample for a large place. They have everything necessary for making a city—climate, topography, abundance of minerals of fine quality and endless variety near at hand, cheap lumber, marble, stone of various kinds, clay, &c. Among our many pleasant experiences there was the comfortable fare at the Tredegar Inn. Our meals were the best we had during our whole trip."

#### THE RETURN TRIP.

After two days at Tredegar we went to Atlanta, which reminds me very much of a Northern city; thence to Savannah, where we stopped at one of the finest hotels I've ever seen. At Charleston we found a progressive and busy city. At Wilmington we visited the only creosote works in this country, which has orders from all parts of the world, including one from the Nicaraguan Canal Co.; also Mr. Donald McRae's cotton mill, where high-quality shirtings are manufactured, and the Navassa guano factory, which has a capacity of 30,000 tons a year and sells all it can make.

Our next stop was at Winston-Salem, which is one of the finest towns in the South. Here are located 35 tobacco manufacturing factories. Lands are very cheap, and are beautifully situated. The property of one company was much like Druid Hill Park. The citizens are first-class men, and are all busy. The tobacco crop is immense this year, and is of fine quality. For some of the crop farmers are getting as high as \$1.26 a pound. This county has fewer mortgages than any other county in the State. Salem was settled 103 years ago by Moravians, whose church organization and methods have kept land titles remarkably straight. The climate is simply delightful.

Our Southern trip ended at Richmond, which shows sympathy with the general Southern movement by steady growth and increasing activity. We returned to Baltimore firm in our faith that the South is entering upon an era of well-rounded development which will eclipse anything ever

seen in this country, because no other section combines so many advantages. The South has climate, soil, minerals, timber and a homogenous Anglo-Saxon population. It is now getting a fair share of outside capital which, of course, adds momentum to the general upbuilding. Rapid as is the growth, it is healthy and has solid basis, and is really as yet only in its beginning, from the Potomac to Tredegar."

## TEXAS' EFFORTS

To Secure Immigration and Capital—  
New Enterprises in Dallas.

DALLAS, TEXAS, November 10, 1890.

Editor *Manufacturers' Record*:

The Texas Real Estate Agents Association is a new organization recently perfected for the purpose of inaugurating active work in the direction of advertising the rich resources of this State, and securing new capital and increasing immigration. At a directory meeting of the association, held in this city yesterday, a plan of work was adopted, and an agent was employed to canvass the cities and towns of Texas for membership in the association, and to urge them to send representatives to the meeting of the association, to be held in Houston December 10, 1890, which will propose the raising of a joint fund by the different sections of the State in the sum of \$100,000 per year for the purpose of sending out cars of exhibits throughout the North and East, and also to raise and keep a permanent exhibit of the resources of the State in two or three of the leading cities in the North, and to get up proper advertising matter; and that all boards of trade and other organizations authorize their delegations to said convention to pledge their cities for such amounts as they can give towards said joint fund.

At the Houston meeting the following topics will be discussed by well qualified speakers: "Immigration," "The Best Method to Induce Immigration to Texas," "The Best Method to Encourage Manufacturing in Texas," "The Possibilities of Texas," "The Resources of Texas."

The directory decided to locate exhibits of Texas products in charge of agents in New York and Chicago, and provide them with an abundance of advertising matter just as soon as sufficient funds have accumulated. Texas railroads have signified a willingness to co-operate in the work, and even a desire to do all they can to push it forward. It is looked upon as a very important movement, and it shows that the people of Texas are enterprising and wide-awake, and determined to develop the State and increase its population, and add to the number of its industrial enterprises.

A portion of the machinery to be placed in the South Dallas weaving mill has arrived. The buildings are nearly completed, and the projectors of the enterprise expect to begin weaving cot on checks and that class of goods by the first of next January. 125 looms will be placed, and 100 operatives will be employed from the start.

A movement has been started looking to the construction of a rapid transit railway line between this city and Fort Worth, some 30 miles west. Fort Worth is a growing city, and the close relations between the two demand hourly trains, which this new line it is proposed shall furnish.

The clearing-house statement for the week ending October 25 gave the clearings at \$3,520,648, an increase of 83.3 per cent. over the business the corresponding week last year.

The success of artesian wells in this city having been practically demonstrated, a number of leading suburbs will be supplied with water from this source, and the city council is considering the advisability of adopting it as a source of public supply.

## DURHAM.

The Queen City of the Golden  
Belt of North Carolina.

[Written for MANUFACTURERS' RECORD.]

There are many cities in the South whose development compels people to speak of it as "wonderful." To none is this adjective more apposite than to Durham, N. C., a city unique in its origin and in the record its business men have made for wise, far-seeing enterprise.

Durham received its name in 1856, when the North Carolina Railroad reached the estate of Dr. Bartlett Durham, in Orange county, and established a small station there. An insignificant village grew up around the station, and some time after 1861, Mr. John R. Green, who was too feeble to bear arms, began there the manufacture of granulated smoking tobacco from the bright leaf that is peculiar to that section of North Carolina, and sold it to soldiers of the Confederacy. His factory was a small log cabin. In 1865, when the armies of Sherman and Johnston faced each other between Raleigh and Greensboro, and the armistice was declared that resulted in the surrender of the Confederate forces, Durham was neutral ground. On the broad, level plain, where now is a flourishing city, the men of both commands met in amity and smoked their pipes of peace, drawing upon the ton or more of prepared tobacco that was heaped on the floor of Mr. Green's deserted cabin until the stock was exhausted. It was a splendid advertisement, as the event proved. Soon after the Federal army disbanded orders, accompanied by cash, poured in upon Mr. Green from all parts of the North, and he who had supposed himself ruined found instead that he was the owner of a growing, lucrative business.

After the armies disappeared Durham was a village of but 90 inhabitants; now it is a city of 8,000 people, 2,000 of whom are employed in her factories and shops, earning annual wages amounting to \$750,000. There are 23 industrial establishments, employing an aggregate capital of \$12,000,000. There are three banks with a capital of \$400,000 and a surplus of \$49,000, which had deposits July 31st amounting to \$623,000. The revenue tax paid last year by her tobacco manufacturer was \$627,269.64, and their contracts for advertising this year reach the round sum of \$1,000,000. The tax valuation of the city is \$6,293,898, and the rate paid for city, county and State is but one per cent.

This flourishing town supports three newspapers, two daily and one weekly; it has excellent schools, common and graded, for the children of both races, and ten churches. Here also is Trinity College, an institution of the Methodist Episcopal Church South, to which during the current year the people of Durham have donated \$125,000, while friends of education in other places have furnished funds for the erection of two additional buildings, one for a theological school, the other for a polytechnic institute. Durham also has well-paved streets, lined with fine business blocks, banking houses and public buildings, and in the residence sections are some of the most beautiful homes in North Carolina, if not in the entire South. All modern improvements have been introduced, such as water works, an electric-light plant, a telephone system, a first-class street-car line, an admirably equipped fire department, an efficient police, who, however, have little to do. The contrast between these conditions and the little log hamlet of 1865 may well excite our wonder.

What has wrought this change? Many causes have combined to produce it, but chief among them have been the wise enterprise and unflagging energy of Durham's foremost citizens.

In 1869, after the death of Mr. Green, his business was purchased by Messrs. W. T. Blackwell & Co. The same year a charter was obtained, and Durham became a city. From that time forward development has been surprisingly rapid. It is no disparagement to his energetic and enterprising fellow-citizens to say that the acknowledged leader in all enterprises for the advancement of Durham's interests is Hon. Julian S. Carr, at first a junior partner of W. T. Blackwell & Co. and now the president of the Blackwell Durham Tobacco Co., the gigantic corporation which is the outgrowth of that firm. This gentleman was gifted with a genius for advertising and a penetration and foresight that enabled him to comprehend the vast possibilities of Durham, if only her natural advantages as the center of the "golden belt of North Carolina" could receive world-wide recognition. Immediately after his acceptance of the partnership offered by Mr. Blackwell he perfected a system of advertising that soon carried the name and the fame of Durham tobacco to the ends of the earth, and brought orders from every quarter of the globe. His marvelous success led others to follow his example, and thus the city of Durham and the delightful flavor and fragrance of its tobacco were associated together in the minds of smokers everywhere throughout the world. And just here comes in an interesting and instructive history. While Durham was the center of "the golden belt," it drew its supply of the precious leaf chiefly from the county in which it was located. Up to 1865 the tobacco cities of Virginia had bought most of the peculiar leaf tobacco of that part of North Carolina, and it was the popular impression that it was a product of the former State. It was necessary that this mistake should be corrected. It was still more essential that the tobacco farmers of the eight counties in which the rare leaf was grown that had given to them the name of "the golden belt" should have a home market for everything they produced. There was but one way in which that desirable change could be effected, and that was by the establishment of sales warehouses at Durham, and by the securing of such banking facilities as were needed to insure to the sales warehouses ample funds for meeting all demands. Largely through Mr. Carr's persistent urgency these results were secured, and now Durham markets annually 15,000,000 pounds of tobacco, most of which is conveyed to her great warehouses in wagons from the farms of "the golden belt," while the remainder is forwarded by rail. Thus her manufacturers are enabled to take their choice of "bright smokers" and "fine cigarette stock" and to maintain their high repute throughout the world. It is the peculiar combination of soil and climate that enables the farmers of "the golden belt" to keep up their unequalled grade of bright leaf, and in the course of years they have acquired such skill in cultivating and in curing this leaf that they fear no rivals and dread no competition. Durham has thus made herself solid with the growers of this peculiar tobacco, and they all look to Mr. Carr as the man to whom they are primarily indebted for this valuable boon.

The citizens of Durham, as their business grew, realized the value of increased railroad facilities, and not only exerted every influence they could command to secure them, but, in addition, subscribed freely, and taxed themselves liberally that they might have other outlets than those furnished by the North Carolina Road. That road ran from Moorehead City to Greensboro by way of Raleigh. It intersected the Wilmington & Weldon Road at Goldsboro, the Seaboard Air Line at Raleigh, and the Richmond & Danville at Greensboro. Their freights went by round-about routes

to their destinations. Something more direct was a necessity. Public opinion was created, powerful influences were worked, money was liberally subscribed, and as a result the following new roads were secured: The Durham & Keysville makes a close connection with the Richmond & Danville at Keysville, and shortens the distance from Durham to Richmond. The Durham & Northern makes a connection at Henderson with the Raleigh & Gaston of the Seaboard Air Line system. The Lynchburg & Durham, recently completed, taps a new territory for Durham that will add largely to its market. It crosses the Atlantic & Danville, the Richmond & Danville at two points, the Norfolk & Western and the Chesapeake & Ohio. By this route Durham is put within ten hours' travel of Washington, D. C. Two other lines are soon to be constructed. The first will be an extension of the Lynchburg & Durham to Fayetteville, N. C., where a connection will be made with the Cape Fear & Yadkin Valley Road. For this the city has recently voted an appropriation of \$40,000. The second is an extension of the railroad already built from Norfolk, through Eastern North Carolina to Stanhope, from whence it will be pushed as rapidly as possible to Durham, that having been decided at a late meeting of the directors of the Wilmington & Weldon Railroad. By these various lines Durham will have transportation to the Atlantic ports and to all points in the interior. Her trade already feels the benefits of the enterprise displayed in securing these new outlets, and will realize them in much greater fold as time progresses.

It has already been intimated that the market for Durham's manufactured products is world-wide. This fact is daily apparent at the railroad freight station, where cases of smoking tobacco and cigarettes may be seen addressed to firms in China, Japan, South America, Australia, the Cape of Good Hope, the great European cities, the Sandwich Islands, as well as to all parts of the United States. Side by side with these are other cases containing shuttles and bobbins for cotton, woolen, silk, jute, linen and worsted mills; cotton goods for New York and other cities; bags of fertilizers for all parts of the South, and any quantity of snuff, plug tobacco and cigars for American merchants. The sidings are always filled with cars discharging and receiving freights, and from daylight to dark all the freight handlers and clerks are kept on the jump to prevent an accumulation of outgoing shipments.

The people of Durham have been so busied with all the claims upon them that they have not in the past found time to give much thought to the town-building schemes that have become a striking feature of this remarkable epoch of Southern development. As has been shown by the foregoing brief historical sketch, Durham, like Topsy, "never was born," it "grewed." But inquiries from outsiders have turned the attention of Durham's citizens to the fact that others desire to participate in the advantages which they possess—advantages in part due to what nature has done for the place, but more especially attributable to the prosperity due to their own exertions. Durham's reputation for business sagacity and business success is telling upon the outside public. The capitalist feels that his money is safe where other men are prospering. The manufacturer, seeking a new field for his industry, prefers a location which has an established fame to one that is unknown. The retail merchant likes a live and growing town surrounded by a rich agricultural country. The young man of energy and ambition will always cast his lot with a people who manifest these characteristics. For all these classes Durham possesses superior attractions. So outsiders have finally prevailed upon the busy people of this indus-

trious city to look about and see if they could make room for others to come and share in their increasing prosperity. When Durham men do anything for business or pleasure, for religion or society, they do it on a large scale and in a liberal spirit. It has been so from the beginning, and any departure from such a course would shock "the oldest inhabitant." The leading citizens, as soon as they became convinced that there were those who wished to cast their fortunes with Durham, took the subject under advisement. They found there was land enough and to spare; that there was room for all comers; that the business of the city might be increased to any extent to the betterment of all concerned; then they organized the Durham Consolidated Land & Improvement Co., with a capital of \$1,000,000. Every share of stock was taken at once. They bought 900 acres of land most eligibly situated, 300 acres for business uses, the remainder for residence sites. They elected as their chief executive officers Hon. Julian S. Carr as president; Col. A. B. Andrews, second vice-president of the Richmond & Danville Railroad Co., their vice-president, and R. H. Wright, Esq., secretary and treasurer.

The company, thus ably officered, carefully considered its plans and agreed upon the following liberal programme: The 300 acres suitable for factories and mills will be divided to suit the needs of manufacturers. Sites will be given to all approved industrial concerns that will locate upon them, and the company will, if desired, subscribe liberally to their stock if they elect to organize as joint stock corporations. In addition it will build a broad-gauge track through the center of this district that will connect with every railroad entering the city, thus saving to the manufacturers large sums in the carting they would otherwise have to do. The company will also construct a dummy line that will put all the suburbs into quick transit with the center of the city.

The 600 acres of residence property are on high ground on two sides of the city. The streets and blocks of lots will be surveyed and laid off so as to secure the best drainage, the best grades for streets and the most picturesque sites. Large sums of money will be expended in these and other improvements to enhance the value of the land.

Especial attention will be paid to the securing of industries that will add greatly to the variety now established in Durham; more than two score are already under consideration. A fine hotel to cost \$100,000 is one of the certainties of the early future.

What Durham has accomplished since 1865 is a sufficient guaranty that her progress will be steadily onward. That the Durham Consolidated Land & Improvement Co. has been so fortunate as to secure for its chief executive officer the large experience and untiring energy of Hon. Julian S. Carr is a proof of the sagacity of its stockholders and a guaranty that all its plans will be executed with untiring zeal and the strictest fidelity. It is a very moderate and very safe prediction to say that from the organization of this corporation Durham people will hereafter date the beginning of a new era of prosperity that shall surpass all their eventful past.

THE annual session of the National Farmers' Alliance will begin at Ocala, Fla., on the first Tuesday of December. At the same place and time an exposition of the natural resources of that State will be opened, and will be continued for sixty days for the benefit of later visitors. The prominence into which this farmers' organization has been brought during the recent political canvass will cause their proceedings next month to be closely watched by the newspapers and by political leaders.

## RICHMOND AND HARRISONBURG.

### The Metropolis of Virginia Co-operating in the Work of Valley Development.

#### Extraordinary Inducements for Industrial Plants—A Great Opportunity for Conservative Investors

[Special Cor. MANUFACTURERS' RECORD.]

RICHMOND, VA., Nov. 10, 1890.

The city of Richmond is itself a striking instance of Southern progress, having increased since the close of the war from a population of 37,000 to nearly 100,000 in 1890; but the wealth of Richmond has increased in a much greater ratio, owing to the fact that Richmond money has been largely invested recently in those new and re-invigorated towns of the "Old Dominion," where every dollar invested has brought back speedily at least another dollar, and in many cases four or five.

One of the latest and most substantial schemes for money-making on a solid basis is the Richmond & Harrisonburg Land Co., which is being directed by Richmond men and Richmond money. The local managers are Bowman, Boswell & Shuman, of 1201 Main street. The president of this company is H. L. Pelouze, of the noted type-making firm of H. L. Pelouze & Sons, while Mr. J. I. Boswell and Mr. S. H. Bowman, of Richmond, are respectively secretary and treasurer.

Happening to have an idle day in Richmond I dropped into the office of Bowman, Boswell & Shuman and talked about the merits of the enterprise. There I met Mr. Pelouze, the president of the company.

Said Mr. Pelouze: "There are a great many enterprises now being offered, but I am satisfied that this will bring a more substantial profit than any heretofore offered to investors. Before embarking in it I took occasion to make a trip to Harrisonburg and personally investigated the property which it is proposed by this company to develop. I found not only a beautiful piece of land adjoining the city, but that there were in the vicinage a great variety of minerals; and, what is of paramount importance, a sufficiency of petroleum to guarantee that Harrisonburg will have cheaper fuel than any town in Virginia. I personally inspected this oil well, which is only half a mile from the property of the Richmond & Harrisonburg Co. I also saw fine specimens of anthracite coal brought from the mine now being opened only 12 miles away. So far as its attractions as a place of residence are concerned, all the world is aware of the healthfulness of the Shenandoah valley, and of the various mineral springs close to Harrisonburg."

"What is the capitalization of your company?" I asked Mr. Pelouze.

"The capitalization of the company is only two hundred thousand dollars, which in view of the intrinsic value of the property is lower than that of any company now asking public support. We have 359 acres, of which 184 lie inside of the corporate limits."

"What are you going to do with the proceeds from the sale of stock?"

"We shall first pay for the property, which we got at a great bargain. After paying for it we shall have left nearly a hundred thousand dollars for development purposes. We propose to build a hotel to cost \$40,000, and probably a number of dwelling-houses."

"How about your land sale?"

"Work begins to day on the streets through our property, and so soon as we have got everything in first-class shape, we shall offer the lots. There will be about 2,500 lots, which at an average of only \$200 apiece will make our stock worth more than two for one. But we haven't fully

decided whether to have the sale in December or to wait till spring. At all events, when it does come off, we shall have excursions not only from various points in Virginia, but from Philadelphia, Baltimore and Washington."

"How is your stock going?"

"The only trouble is we haven't stock enough. We capitalized too low, but, of course, that will inure to the benefit of the stockholders. The shares are \$50 each, payable as follows: Five per cent. down, five per cent. on call of board of directors, and ten per cent. each 30 days thereafter. We are reserving a few shares for Northern and Eastern subscribers. With every ten shares of stock there is given as a bonus to stockholders one business and two residence lots. The inducement to subscribers is, therefore, unusually inviting."

The date of sale, it may be well to add, will be announced early enough to give to investors ample time to get there. One word more. It is now a positive fact that a railroad will be built from Harrisonburg to Elkton, to connect with the Shenandoah Valley, now a part of the Norfolk & Western. Harrisonburg has already \$1,500,000 invested in enterprises which give employment to 1,500 men. The city has water works, electric-light and all modern improvements. Harrisonburg, moreover, is offering great inducements for the location of additional industries.

Richmond is now ablaze with interest in Southern development. This very day there was organized a company to be called the Southern Loan & Investment Co., with a capital of \$1,000,000, the objects of which are the buying and selling of real and personal estate, establishing towns, guaranteeing securities. Mr. Pelouze will also be president of this company. A number of rich Northern men, representing from \$8,000,000 to \$10,000,000, are interested in the scheme.

There is one point about Richmond corporations that is suggestive. The majority of the directors are young and active. The attorneys of most of them are rising young lawyers. Major Jos. H. Dooley, who has been foremost in this line, is not over 40, while Mr. Phil. B. Sheild, the attorney of the Richmond & Harrisonburg Land Co. and also of the Southern Loan & Investment Co., is just 30. Mr. Sheild is editor of the Virginia Law Journal.

THOMAS P. GRASTY.

THE latest report of those that have occasionally appeared during the past three years concerning a new coast line comes from Philadelphia, where a company has been incorporated as the Charleston, Wilmington & Norfolk Railroad, with a capital of \$6,000,000. This company has, it is said, determined to purchase the charters of a number of short projected roads in South Carolina and of one in Virginia, and it is claimed that with these charters and the one possessed by the corporation, it will be authorized to build a continuous line 365 miles in length between Norfolk and Charleston that will shorten the distance between those two cities and with Northern seaboard cities by at least a hundred miles. It is also said that the Carolina Construction Co. has contracted to build the road and has already commenced operations. The president of this company is Mr. John C. McNaughton, of Philadelphia.

SHENDUN, VA., has a local exponent and organ worthy of the place. It is the Shenandoah News, a paper of fair proportions and of handsome appearance. The first number of Volume 1 has been received from the News Publishing Co., of Shendun. It is as full of meat as a fresh-laid egg, and is alike creditable to its publishers and to the promising young city from which it emanates.



## Savernake and the Tin Plate Industry.

SAVERNAKE, VA., November 3, 1890.  
*Editor Manufacturers' Record:*

The demand for real estate throughout the new towns of Virginia continues with astonishing activity, but it is to be noted that those which are based on industrial operations and look to manufactures as their basis of attraction have the call.

The great importance of the tin-plate industry to the South, and especially to this place, has had a great deal to do with the surprising rapidity with which Savernake has come to the front. This tin-plate industry has been the subject of so much acrimonious debate in and out of Congress that it has attracted more attention than any one other item in the list covered by the McKinley tariff bill. Exactly what are the facts connected with the matter, and what can be done with them to benefit Virginia and the whole South, is a subject of so much interest as to merit reference here—the more so as investors in Savernake largely pin their faith upon this industry.

### MANUFACTURE OF TIN PLATE.

Until within the last few years tin plate consisted of the best grades of charcoal iron plate coated by hand dipping in melted tin, the surplus tin drained off and the plate cleansed from the tallow and palm oil used in the process, and polished with bran. Ternes, or roofing plates, have for many years carried an admixture of lead with the tin in coating, but honestly-made tin plates for other purposes have been supposed to be coated with pure tin, although adulterations have been common. With the scarcity of charcoal iron, and since the great progress made in steel production by the Bessemer and Siemens-Martin open hearth processes, steel has taken the place of high-grade iron for the plate as body metal to be coated. By this improvement or substitution of metals, in form or condition, immense profits accrued to the Welsh tin-plate makers. Men who were formerly employes in tin-plate mills now pose as capitalists, and with good reasons while the profits made by them for years were in part, it is alleged, employed to prevent the passage of any tariff bill which should increase the nominal duty on tin plate imported into the United States.

Some idea of these profits may be formed from two facts—the first, that just before the Argentine smash upset all speculation and company promoting in London a prominent works in Wales was capitalized at a very large sum and the stock offered to the British public with the certificates of the chartered accountants who examined the books for a series of years of the erroneous profits made in the business. The second fact is one that will be more apparent to iron and steel men than to the general reader, and is that by the open hearth "pig and scrap" process in the Siemens-Martin furnace the charge of 13 tons consisted, instead of all good charcoal or all Bessemer pig, of one ton Bessemer pig, say, at American prices, \$18.50, and the other 12 tons of the cheapest scrap, worth from nothing to ¼ cent per pound, and which, by skilled manipulation of the heat, produced 13 tons, less furnace loss, of ingot metal, at a cost, pursuing same American currency valuation, of \$12 per ton, labor and fuel added, against \$20 to \$22 if all good material were used. Taking a third fact into consideration, that on "crosses and outsizes," trade terms for so-called heavier weight of coating and larger plates, the consumer got no more tin coating, but simply greater thickness of the steel or iron body material, and we may understand from the three facts quoted what the profits in the business were, and partially why the Welsh makers and their American distributors labored so hard to

defeat any increase of duty to permit the manufacture of tin plate in the United States and kill off this immensely profitable trade in Wales.

### THE VALUE OF TIN PLATE TRADE.

Let us quote from the speeches of both sides in the late discussion on tin plate duty in Congress and we will probably escape error. In a speech of Hon. Wm. M. Springer, of Illinois, made before the House of Representatives May 10, 1890, and officially reported in the Congressional Record, in which speech he styles the McKinley bill "a Chinese wall to check imports and prevent exports," he says with no doubt statistical correctness: "Tin plates are not manufactured in this country; all are imported. The importations of last year amounted in value to \$21,002.09, and the duties amounted to \$7,279.49." If he had added, and the importers' profits, many of whom are stockholders in Welsh tin plate works, amounted to \$7,279.49 more, he would have gotten nearer the exact truth.

In a speech of previous date, viz., May 7, 1890, the Hon. Wm. McKinley, of Ohio, stated before the House of Representatives as follows: "We consumed last year 300,000 tons of tin plate, all of it imported, upon which we paid \$7,000,000 duty, every dollar of which was paid by the consumer, for it is a revenue tariff, and there was no competition at home to influence or regulate the prices. The price of tin plate to the American consumer for the last 24 years has been the foreign price fixed by the foreign producer with the American duty added, and every dollar of that duty has been paid by the canners and by the consumers in every form, small and great. We have now four mills which can be at once adapted to making tin plate. They can produce about 4,000 tons a year. It would require 90 mills of the dimensions of those now here to make the tin plate used in this country, and this would require over 23,000 men to be employed directly in this industry. But the benefits would not stop here. The additional labor in mining the coal and ores, in producing the pig metal, the lead, the tin, the lumber for boxing and the sulphuric acid would furnish labor to 50,000 workmen, and bring support to 200,000 people. The capital required would be above \$30,000,000. I know no more certain and encouraging field for labor and capital than is here presented."

And if I am right in my previous assertions, that this State of Virginia, and that portion of it in the great valley flanking the western side of the Blue Ridge, contains all the material, assembled by nature, for the production of this tin plate, for the iron ore and the tin ore, and the sulphuric acid and the lumber for boxing, why should Virginia not "furnish labor to 50,000 workingmen, support 200,000 people and employ above \$30,000,000 of capital?" And a part of this is just what Savernake is after.

### A LITTLE INSIDE HISTORY.

Mr. McKinley further states in the same speech from which I quote above:

"The bill proposes to advance the duty from one cent per pound, the present rate, to 1.85 and 2.15 cents per pound, varying according to gauge. The existing tariff presents the anomaly of placing a higher duty upon the sheet iron and steel, which constitute the chief element in the production of tin plate, than upon the tin plate itself, which is a manifest wrong demanding correction, independent of the question of encouraging the manufacture of tin plate in the United States. The duty recommended in the bill is not alone to correct this inequality, but to make the duty on foreign tin plate high enough to insure its manufacture in this country to the extent of our home consumption. The only reason we are not doing it now and have not been able to do it in the past is inadequate

duties. We have demonstrated our ability to make it here as successfully as in Wales. We have already made it here. Two factories were engaged in producing tin plate in the years 1873, 1874 and 1875, but no sooner had they got fairly under way than the foreign manufacturer reduced his price to a point which made it impossible for our manufacturers to continue. When our people embarked in the business foreign tin plate was selling for \$12 per box, and to crush them out before they were firmly established, the price was brought down to \$4.50 per box, but it did not remain there. When the fires were put out in the American mills and the manufacturing thought by the foreigners to be abandoned, the price advanced until in 1879 it was selling for \$9 and \$10 a box. Our people again tried it, and again the prices were depressed, and again our people abandoned temporarily the enterprise, and, as a gentleman stated before the committee, twice they have lost their whole investment through the combination of the foreign manufacturers in striking down the prices, not for the benefit of the consumer, but to drive our manufacturers from the business, and this would be followed by an advance within six months after our mills were shut down."

When the effort was about to be made to advance the duty on tin plate, the House and Senate committees, by their chairmen, made haste to inform themselves thoroughly as to the actual cost of tin plate manufacture in Wales compared with wages of labor there, and cost of making the same here under American wages. Information was obtained from every reliable source, and actual cost-sheets were obtained from books of works in both countries. In addition to this the testimony was taken of practical workers in tin plate both in Wales and in the effort to establish the industry in the United States in 1873, 1874 and 1875, as stated by Mr. McKinley. Prominent among these witnesses were two men, John Jarrett and Wilkins Trick, both Welshmen, both practically connected at home with tin plate production and sale in all its branches; in short, both first-class experts in their specialty. By their aid a table of comparative costs and wages in both countries was prepared, and that table, although picked at and pulled over in both houses, could not be confuted either by foreign manufacturers or importers, and stood the test of all criticism. From these costs the duty of from 1.85 to 2.15 cents per pound was fixed, and it enables the United States, and pre-eminently this section of Virginia, to establish an industry of the proportions quoted from Mr. McKinley's address. To further quote a much roasted chestnut, "it is a condition which confronts us, not a theory," and if by means of that duty we can give wages to 50,000 laborers and employment to 200,000 people, and use \$30,000,000 of capital in the South, as we can, it is a most satisfactory "condition," and we will not bother about the "theory" just now.

In point of fact, the average Virginian is bothering just now much more about securing those very industries for his "boom town" which shall render his lots valuable and add to their future values than he is about any theory or any sentimentality of politics. And the theory which in the near future will convince him to allow these industries to be shut up and the bottom knocked out of his 100 per cent. profit on lot sales will have a disagreeable duty to perform in confronting him.

Of the two men who, by their practical knowledge of tin plate costs and manufacture in Wales and the United States, helped to this duty, one, Mr. Jarrett, will probably continue in Western Pennsylvania, while the other, Mr. Wilkins Trick, now of Hubbard, Ohio, will be the manager of

the Savernake Tin Plate Works, an assurance that it will be a skillfully conducted business enterprise, in the hands of an expert specialist, and no experiment under the possibilities of profit from advanced duties.

### COSTS AND PROFITS.

To enter into detailed costs and profits of a new enterprise in a communication like this would be a prostitution of business data, which are the property of investors. Suffice it to give following figures: The cable report of the British metal market October 23, 1890, to the New York Iron Age quote: IC coke plates f. o. b. Liverpool 18s. sterling per box; put this at 16s. Welsh port, drawback on this would make it 15s. 7½d., or in our money per box \$3.75. Freight, insurance, delivery and duty bring this at New York to \$6.34. American tin plate made from Bessemer pig at Pittsburgh quotations, viz., \$18.50 per ton, costs inside \$5 per box. Whether pig iron can be had in the South less than \$18.50 per ton the Southern people ought to know by this time; and if they do, they won't need any "ready reckoner" to calculate the attainable profit in this business.

### COMPETITION.

Can the foreign makers undersell us with this duty, as has been said? No! Wages are down to the lowest cent their labor can live on. Steel cannot be made cheaper there than now, and tin costs them precisely the same price as it does us, for all these computations of cost and profit have been made on basis of use of foreign tin at 25 cents per pound New York. When the Blue Ridge begins to give up the tin there waiting beneficence, we will have another 1 per cent. duty imposed by nature. But will they not come here and compete? Two significant facts prevent—one, that Welsh tin plate works are frequently located on leasehold ground and no building or machinery can be removed; and, second, as to the emigration of labor from Wales, one of the prominent visiting tin plate manufacturers lately visiting Chicago replied to this question: "The old ones are attached to the soil by domestic ties which will prevent, and the younger ones are too poor to get away." A commentary on foreign wages, which, God forbid, should ever be possible in the United States.

And so we have a new industry which we can go to work at certain of fair profit, certain of steadily cheapening the product by American skilled labor and inventive genius, and certain to make the South, and of all the South, Virginia, the dominating tin and tin plate producing section of the world.

### THE SAVERNAKE TIN PLATE WORKS.

This industry is progressing as rapidly as one of such magnitude can, and the organization is being completed satisfactorily. It will be a matter of some months to erect works of such a magnitude. All costs are made up exclusive of consideration of any Virginia tin product. This will come, and is assured; but if a fair profit is certain with foreign tin at 25 cents per pound, a fairer one will come with Virginia tin at 5 cents per pound! If it were possible, it would be desirable to have this purely a Virginia company, but with the extension of the works such capital can come in, and now if the temper and disposition exists here the works can be made an 8,000-box works weekly from the start. This will make it, so far as yet known, the largest tin plate works contemplated in the United States.

The other industries secured are preparing to build, and Savernake will soon present as busy a scene as Buena Vista, and that is a sight to gladden the heart of every lover of American industrial progress, as well as that of every investor in it. The Loch Laird Estate & Mineral Co., Limited, has within the past week doubled the

area of its territory by the purchase of nearly 700 acres valuable mineral, timber and town-site land adjoining. This will afford additional room for industries crowding on us, enable a larger supply of mineral to works proposed, afford room for still greater industrial population, and give an opportunity to the many lot buyers who did not get their first choice. It insures with time an industrial city, and is a guarantee to investors of the *bona fides* of the company which thus carries out its promise of fostering and sustaining Savernake. It further doubles values to shareholders, since the addition is made without any increase or new issue of capital stock, which is earning large dividends, beside the great outlays for improvements and additions made necessary by Savernake.

Such is the "condition that confronts us." *Verbum sap.*

### Prosperous Virginia.

LEXINGTON, VA., November 10, 1890.

Editor *Manufacturers' Record*:

There is no part of the South to which attention has been more generally directed on account of its vast resources than the valley of Virginia, and especially to the county of Rockbridge. By far the greater portion of this territory is rich in minerals, principally iron ore and manganese, and its close proximity to the wonderful coal fields of Pocahontas and New River has awakened such an interest as has led capitalists from all sections to aid in its development, and have proved in every instance most profitable investments.

One of the latest and most promising enterprises now in Virginia is the Irish Creek Mineral & Development Co., lying on the Shenandoah Valley Railroad in the valleys of South river and the Irish creek, and about 9 miles from the historic town of Lexington.

An industrial town to be located on this property is to bear the name of Cornwall in recognition of its nearness to the well-known tin deposits in this section, and is one of the choicest spots in this valley for beauty and healthfulness of location, grandeur of scenery, natural drainage, abundance of pure water, railway facilities, nearness to coal, and its inexhaustible deposits of iron ore is unsurpassed by any section of the State. Its mineral lands embrace an acreage of something over 4,000, with 1,000 acres for its town-site. Its ores are of a high grade, containing from 52 to 57 per cent. by analysis of metallic iron. Capitalists and manufacturers contemplating the erection of plants in the South would do well to consider the merits of this enterprise.

AN important project is about to be placed under way in Florida. It is the construction of a canal across the State, uniting the Atlantic with the Gulf of Mexico. The route selected is understood to be from St. Augustine through St. John's county to the St. John's river, which it will strike at or near Federal Point; crossing the river to Sauble, it then takes a south-westerly direction to Cedar Key, passing through Orange lake, which it is proposed making a great central point, and locate along its shores commercial and industrial enterprises. The length of the canal is stated as 117 miles, with a depth of 28 feet and a surface of from 200 to 250 feet. The company having the work in hand is the Florida Ocean & Gulf Canal Co., and is said to be able financially to carry out its plans.

A BUSINESS-LIKE little pamphlet written in a breezy, conversational style, entitled "The Secret of Successful Band-sawing," is published by Goodell & Waters, of 3201 Chestnut street, Philadelphia, Pa. The secret revealed is the use of the "Mohawk Dutchman" band-saw guide manufactured by that firm, and which has created a favorable impression wherever tried.

## BASIC CITY, VA.

Meeting Point for the Coal and Iron of the Two Virginias—Cheap and Rich Lands, Pure Water, Pure Air—A Population of 10,000 Assured—Great Auction Sale of Lots December 3d and 4th, 1890.

[From an Exchange.]

BASIC CITY, VA., November 10, 1890.

Look at the azure *contour* of the Blue Ridge throughout its whole length, and just where the dip touches nearest the emerald valleys reaching towards it, stick a pin—that is Rockfish Gap. Think of the Appalachian system, and you will remember that nature has furrowed but

ONE WAY

through its 250 miles of mountain barriers, and that its eastern outlet is—where you may stick another pin and strike the same place—at Basic City, Va. The fertile valleys and the great canyon of the Alleghany mountains, the prominent topographical features of the two Virginias, look towards one point; the vine-clad hills of the Piedmont region touch it; the two great Southern trunk lines of railway, the Chesapeake & Ohio and the Norfolk & Western, taking the hint, come to the same conclusion of the same place.

BASIC CITY, VA.

If the reader will observe the map of the State he will remark that this place is situated at about—at, to be emphatic—the longitudinal center of Augusta county, the most opulent agricultural district in and central county of the famous Shenandoah valley—the most healthful, richest, fairest and, having a trend towards our Atlantic coast, north of the reach of pestilential fevers, south of the frozen six months. Well, so far south that when Boreas strikes you it's with a "scuse me" kind of lick; east of the hot withering winds and droughts of "the West;" west a hundred miles, forsooth, of the oyster-beds and shad preserves of Chesapeake bay; between these all, up in an atmosphere which, while laying your brow, is painting your cheeks. Well within, withal, the embrace of the mineral belt, within hearing of the sighs of their primeval forests and at the embrasure of the New South's

GREAT BOOM.

If you would locate Basic City more precisely, you may, *in propria persona*, by a three hours' ride from Washington city over the Chesapeake & Ohio, right at the western base of the Blue Ridge. If you and your sweetheart, by mistake, take different routes from Memphis, north, to some Gretna Green, she will inevitably cross you and may give you a smile at Basic City; if returning west from the orange groves next spring you find yours and your friend's tickets start out divergently, you may safely say to him: "I'll see you at Basic City;" elect as you will touching competitive roads between New York and the Mississippi valley your invoices will find, *in transitu*, Basic City; the Western hog and hominy and the cotton and cane of the South go East through the transverse gates ajar at this place. On this superb

VANTAGE GROUND

Basic City was founded in May, 1890, and is therefore five months old! Within a few days—less than a week—from the incorporation of the Mining, Manufacturing & Land Co., the prime movers in this vast enterprise, the whole of the capital stock of \$700,000 had been taken and the place given active headway. To-day the plants here well on towards completion represent, it is fairly assumed, millions of dollars. Among others one of the very handsomest hotels I have ever seen—

THE HOTEL BRANDON

From beyond the river, miles away, this exquisite piece of architecture, with the

Blue Ridge as its background, looks like a charming picture whose colors had been borrowed from the prospective of some Scottish highland. A 100-ton blast furnace, immense car works, a factory for the manufacture of builders' materials, aggregating a frontage of 750 feet, to employ 500 hands; paper, furniture and match factories—splendid enterprises, all of them; the School Furniture Co.'s works, employing 400 hands, their buildings covering three acres; a factory for the manufacture of knit and woven goods, giving employment to 100 hands, are establishments I mention as occurring to me off-hand. These, with many residences, stores and Advance newspaper office, bank buildings, exchange, school, Normal College, other and numerous edifices, etc., show a record for Basic City in the matter of town-building

WITHOUT A PARALLEL.

When we see this country doubling their millions of people as the years rush by it behooves the wise man to look well about him for a place where he may safely risk his savings, so that when the house is full his seat will have been "taken" and then the band may play. Basic city courts the scrutiny of all such.

The management of this place is masterly, conservative, and, in the interest of all classes, comprehensive. The results will be permanent; you had better catch on. Cities nowadays that go up to stay up must have these builders—an abundance of cheap feed and fuel, raw material and railroads. Concerning the latter, the Chesapeake & Ohio and the Norfolk & Western, the great common carriers south of Mason and Dixon's line, cross each other at right angles and tie

A COMMERCIAL BOW-KNOT

in the heart of Basic City. These two roads give her the benefit of competitive rates to all points, but with the completion of a ten-mile link, for which the charter has been obtained and the survey made, she will have within her corporate limits the Baltimore & Ohio, when her position as a railroad center will have added pre-eminence, so that there can be no budge about Basic. A thousand miles of cuts and fills bend towards her; a thousand miles of iron spikes nail down twice a thousand miles of steel rails reaching, through exhaustless beds of coal and iron, this coal; the contributions of science, years of arduous toil, millions of dollars it took to bring and knit together this great consummation at this Western Sheffield.

From distant regions fortune sends  
An odd triumvirate of friends.—*Swift*.

*Exempli gratia*, the Chesapeake & Ohio, the Norfolk & Western, and Baltimore & Ohio railroads.

That the furnaces at Basic City can place iron in Pittsburgh or New York at \$3 per ton less than Alabama plants, and for from \$10 to 12 per ton less than the Lake Superior output, is the evidence of the most eminent authorities; that the supply of brown hematite ores, assaying 45 to 55 per cent. metallic iron in areas contiguous to Basic City, is literally limitless, is a scientific demonstration.

These ores are found for 50 miles north and south from this place in strata virtually unbroken. With other properties owned by the Mining, Manufacturing & Land Co. are mentioned their large holdings of these mineral lands lying immediately along the line of the Norfolk & Western Railroad. In these premises we quote from a late Philadelphia Press: "But the advance of the South is to a great extent at our expense. Her cotton mills will compete with those of New England and the Middle States, and her furnaces are supplying pig iron at rates which make it impossible to run those of Pennsylvania." Certainly. In 1883 the total coal and coke shipments over the Norfolk & Western were 100,000 tons in round numbers; in 1889 the ship-

ments ran materially over 2,000,000 tons; in 1883 the shipments of coal over this road were 4,735 tons; in 1889 the shipment was over 1,500,000 tons; in 1883 this road shipped 23,762 tons of coke; in 1889 310,504 tons, and yet it is true that "neither the coal fields nor the ore regions can be considered as beyond the initial steps of development." Basic City is at the conjunction of the two great Southern coal, coke and iron-carrying roads—the one coursing the Kanawha and New River coal fields and piercing the iron mountains of West Virginia; the other bringing to us on a gravity pull almost exhaustless supplies of coal and coke from Pocahontas, Bloomsburg and Elkhorn districts, in the last of which may be included the Flat Top region, where alone there are 162,000 acres "actually underlaid with coal." These facts must go home and wear conviction upon the minds of the most carefully cautious. I am not interested to the extent of a siver in the rise or fall of any town North or South, but so splendid is the history, so brainy the management, and so marvelous the growth of this game city that enthusiastic admiration is literally wrenched from me. Aside from other considerations, right here is a climate where it is a luxury to live. Under the sun there is no lovelier a land, none more fertile, none more picturesque than the Shenandoah valley. As the bright correspondent of the Financial Reporter says, "it is as good as Chester valley or Pequa valley, or Lancaster or Bucks counties, in Pennsylvania; just as good as any part of Western New York, and better than any part of New England for farming, grazing or fruit purposes, etc." Let me say that in my opinion lands quite as good as those indicated above can be bought within an hour's ride of Basic City at much less than half the prices they would bring.

The waters of South river, not limpid because blue, course round the western and run through the eastern limits of the city, catching as they purr the mountain brooks from the hills hard by. It is spanned within the corporation by

THREE IRON BRIDGES.

On the bluff west of this stream there are for sale some building sites whose scenic surroundings are ineffably grand. It seems to me a man would be about happy with a villa there, a Whitehall boat in the river, plenty of good fishing tackle, some minnows, a quart—nay, a pint of—! See? Better call it a pitcher, tho', of the

LITHIA WATER

which wells up through white gravel 1,000 gallons a minute—more than 1,000,000 gallons a day—and is piped into a reservoir on an eminence overlooking the city. Values have been doubling here faster than new moons come, and, in many instances, have quadrupled since May last. The soil is a fertile admixture of clay-marl and sand, is consequently absorbent, and therefore free from malarial influences. The drainage, a prime consideration, is perfect. The streets and avenues are broad and handsome, having been graded by skilled engineers. Cosmopolitan Basic has her latch-string hung outside the outer door and heartily asks your coming.

The Basic City Land Improvement Co. have advertised a large lot sale, which is to take place on December 3 and 4. At this sale a number of their choice residence and building lots will be put up at public auction.

WILLIAM.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.



THE  
MOST INVITING FIELD IN THE SOUTH FOR  
PROFITABLE INVESTMENTS.

A Charming Place of Residence. A Health-Giving Climate  
Winter and Summer.

The Most Attractive Town-Site in the South. Located in a Beautiful  
Valley, Surrounded by Heavily-Timbered Mountains.

UNEQUALLED IN NATURAL ADVANTAGES.

A \$1,000,000 STEEL PLANT at

**TREDEGAR** is now under construction. This is the  
largest industrial enterprise ever estab-  
lished in the South; will employ over 3,000 HANDS.  
about 2,500 of them Skilled Mechanics.

THE MOST LIBERAL INDUCEMENTS FOR THE LOCATION OF  
MANUFACTURES, LARGE OR SMALL.

Address for further information: GOLDSMITH B. WEST, General Manager, JACKSONVILLE  
MINING & MANUFACTURING Co., Tredegar (Present P. O., Jackson-  
ville), Alabama.

Population 2,500.

Bank, Schools, Churches, Hotel, Water  
Works, Splendid Residences, Excellent Society.

Old name of town, and present name of the Postoffice, is Jacksonville, the County Seat of Calhoun,  
one of the Richest Mineral and Agricultural Counties in the State.

*MANY LARGE INDUSTRIES SOON TO BE LOCATED.*

TREDEGAR

STEEL WORKS will include three Furnaces, Rolling Mills, &c., to produce 300 tons of Steel daily,  
covering every line of manufacture from the ore to the finished Steel. The entire plant, including  
furnaces, buildings machinery, &c., is under contract. Will employ 3,100 hands.

For particulars address GOLDSMITH B. WEST, General Manager JACKSONVILLE MINING & MANU-  
FACTURING COMPANY, Tredegar (Present Postoffice, Jacksonville), Alabama.

Alabama.



# KIMBALL.

MARION COUNTY,

TENNESSEE.

## KIMBALL TOWN COMPANY.

**H. I. KIMBALL,**

Vice-Prest. &amp; Managing Director.

**DIRECTORS.**

HON. LOGAN H. ROOTS, President of First National Bank, Little Rock.  
 CHARLES P. RICHARDSON, Capitalist, Chattanooga.  
 J. R. STEVENS, President First National Bank, Huntsville, Ala.  
 A. J. MORISON, Capitalist, London, England.  
 J. H. BRYANT, President Seattle Coal & Iron Co., New York.  
 GEO. COOK, President Hallet & Davis Piano Co., Boston, Mass.

HON. H. L. COCHRAN, Judge Probate Court, Fort Payne, Ala.  
 H. I. KIMBALL, Atlanta, Ga.

**OFFICERS.**

President, HON. LOGAN H. ROOTS.  
 Vice-President, C. P. RICHARDSON.  
 Second Vice-President and Managing Director, H. I. KIMBALL.  
 Treasurer, J. H. BRYANT.  
 Assistant Treasurer, ED. E. RICHARDSON.  
 Secretary W. E. DONALDSON.  
 Assistant Secretary, W. BROOKS COVELL.

**ATTORNEYS.**

W. E. DONALDSON, Kimball.  
 SHEPHERD, WATKINS & BATES, Chattanooga.

**ENGINEERS.**

Landscape Engineer, NATHAN G. BARRET.  
 Resident Engineer, W. J. KELLY.  
 Sewerage and Electrical Engineers, NIER, HARTFORD & MITCHELL.

Hon. SAM'L H. DUCK, Gen. Superintendent.

**OFFICES.**

Richardson Building, Chattanooga.  
 Union Trust Building, 80 Broadway, New York.  
 Company's Building, Kimball, Tenn.

**Kimball Offers**

Solid, practical inducements to manufacturers. First-class enterprises under good management will be guaranteed, one-half the cash required. Local taxes will be remitted for a term of years. Lowest freights and cheapest raw materials will be secured.

**Auxiliary Companies**

will be organized by the parent corporation for developing the wealth of the Sequachee Valley and for supplying the city with heat, light, water, power and transportation.

**A Mammoth Industrial Building**

will be erected by the Kimball Town Company, which will have power, light and heat, that will be supplied to manufacturers on the most liberal terms.

Ample provision made for religious and educational institutions.

**No Further Auction Sales**

this year and no private sales of the corporation's lots except to those who will contract to build immediately on plans approved by the management.

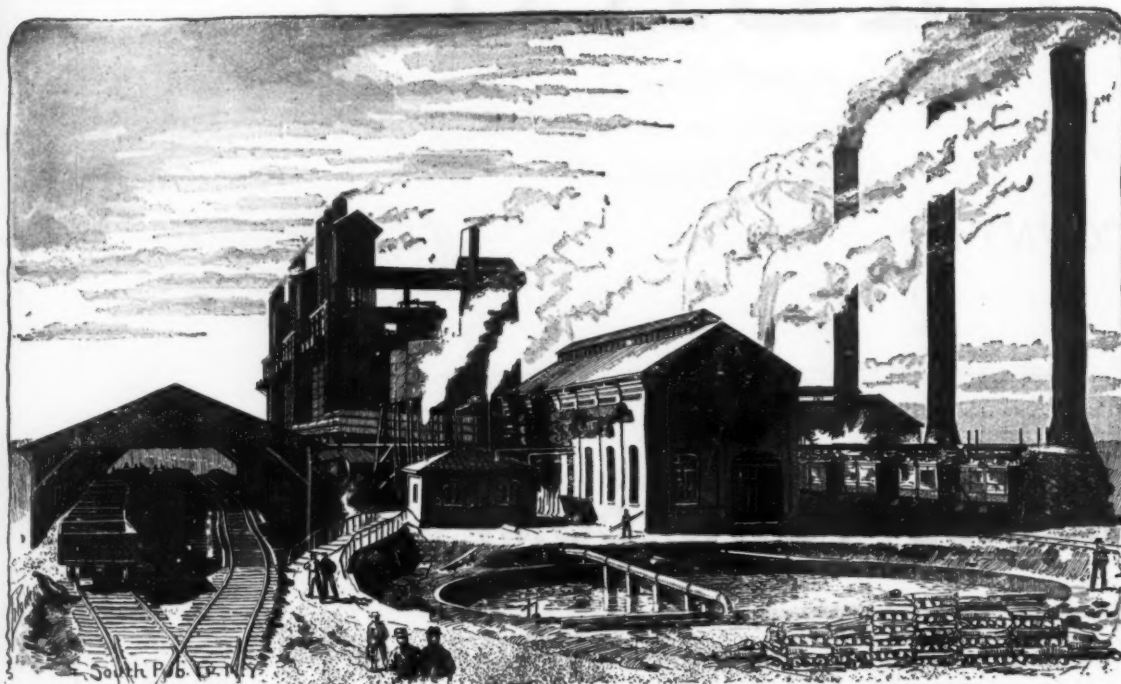
ALL CORRESPONDENCE SHOULD BE ADDRESSED TO

H. I. KIMBALL, Managing Director,

CHATTANOOGA, TENN.

# SHEFFIELD, ALA.

## THE SUPERB.



At the Headwaters of Deep Navigation on the Tennessee River, the Hudson of the South.

The Largest Producer of HIGH GRADE Pig Iron of any City in the Entire Industrial South.

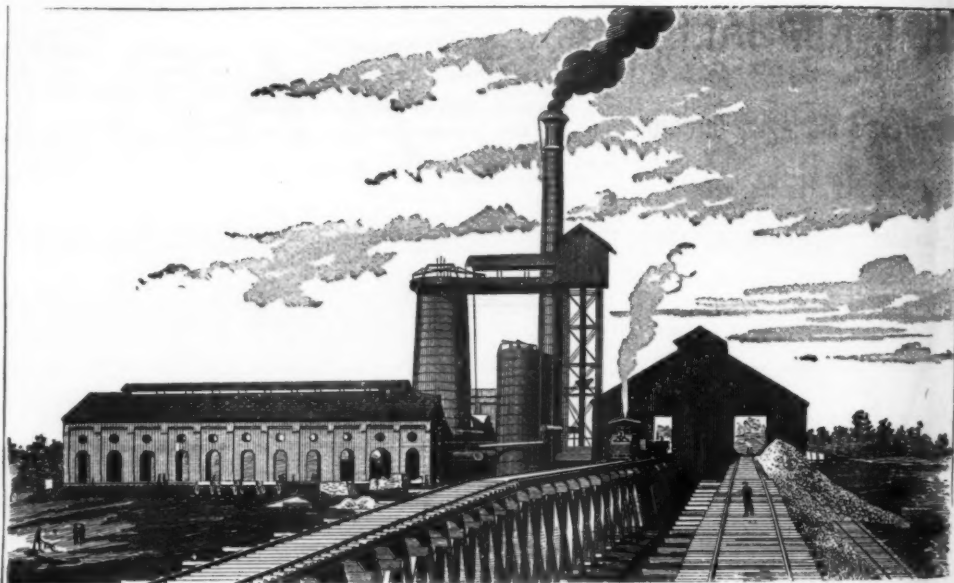
The only point in the South that has or can ship pig iron to the cities on the Mississippi, Missouri and Ohio rivers by boat or barge without rehandling. This last shipment of 5,000 tons of Pig Iron to Pittsburgh, Pa., by barge was made at a saving of \$2.65 per ton over what any iron-producing city of the South has done or can do to-day.

Five Large Blast Furnaces

Capacity 750 tons pig iron per day.

The following are among the corporate and private enterprises that belong to Sheffield:

The Sheffield Land, Iron & Coal Co., capital \$1,000,000.  
The Sheffield & Birmingham Coal, Iron & Railroad Co., capital \$1,000,000; the owners of three 150-ton blast furnaces.  
The Birm., Sheffield & Tenn. River Railway Co., capital \$5,000,000.  
The Hattie Ensley Furnace, capital \$200,000.  
The Lady Ensley Furnace Co., capital \$200,000.  
The Electric Light & Gas Fuel Works, \$50,000.  
The Sheffield Ice Co., capital \$25,000.  
The Sheffield Manufacturing & Constructing Co., \$30,000.  
The Sheffield Contracting Co., \$50,000.  
The Eureka Brick & Lumber Co., \$30,000.  
The Howard Brick Co.  
The Sheffield Bakery & Bottling Works.  
The Sheffield Mineral Paint Co., capital \$50,000.  
The Sheffield Agricultural Works, capital \$40,000.  
The Sheffield Cotton Compress Co., \$50,000.  
Millan Brothers, Steam Laundry.  
Enterprise Publishing Co.  
Water Works, already expended, \$30,000.  
Sheffield Street Railway Co., capital \$100,000.  
Cleveland Hotel Co., capital \$50,000.  
Sheffield Hotel Co., capital \$120,000.  
Bank of Commerce, capital \$150,000.  
East Sheffield Land Co., capital \$500,000.  
Hull & Keller's Fern Quarries.  
Mobile Real Estate Co., capital \$50,000.  
Sheffield Real Estate Co., capital \$50,000.  
Sheffield & Mobile Improvement Co., capital \$100,000.  
Sheffield Stove Works.  
Henderson Milling Co., capital \$100,000.  
Globe Iron & Brass Works, capital \$40,000.  
Standard Machine Shop & Foundry, capital \$50,000.  
Owen Pink Mixture Co., capital \$300,000.  
Bell Telephone & Telegraph Co.  
Foulds' Shoe Factory, capital \$20,000.  
Enterprise Wood Working Co., capital \$30,000.  
Buchanan Straw Goods Factory, \$25,000.  
The Sheffield Harness & Saddlery Co., capital \$20,000.  
Principal Shops of the Sheffield & Birmingham Railroad.  
Principal Shops Memphis & Charleston Railroad, now being built.



Aside from the foregoing the following are in course of construction and may be considered positive: Principal Shops of the Memphis & Charleston Railroad; Principal shops of the Nashville, Florence & Sheffield Division of the Louisville & Nashville Railroad. Reasonably certain to be secured in the near future are the following, in regard to which negotiations are pending: A Rolling Mill; Large Machine Shop; A Cotton Mill.

## ALABAMA'S IRON CITY.

The Superb Location at the head of navigation on the Tennessee River, commanding the outlet to immense fields of IRON ORE and COAL and magnificent tracts of the finest Timber. Has already attracted to the spot where three years ago in a cotton field her projectors set the stakes of a new city, capital and people, unequalled in amount and number, circumstances considered, by any of the so-called new cities of the South.

With eight Church Organizations, two Free Public Schools, Postoffice, Telegraph and Express offices and abundant facilities of transportation by river and rail. It has every advantage as a residence city that can be desired.

Good Water; Drainage Excellent; Health and Climate Unsurpassed. Free Public Schools and Churches. Splendid opening for men of push and energy. No better point for profitable investment. No "Old Foggy" element here.

### Sites for Manufacturing Enterprises

And for Free Public Schools and Churches

Donated by the Sheffield Land, Iron & Coal Company.

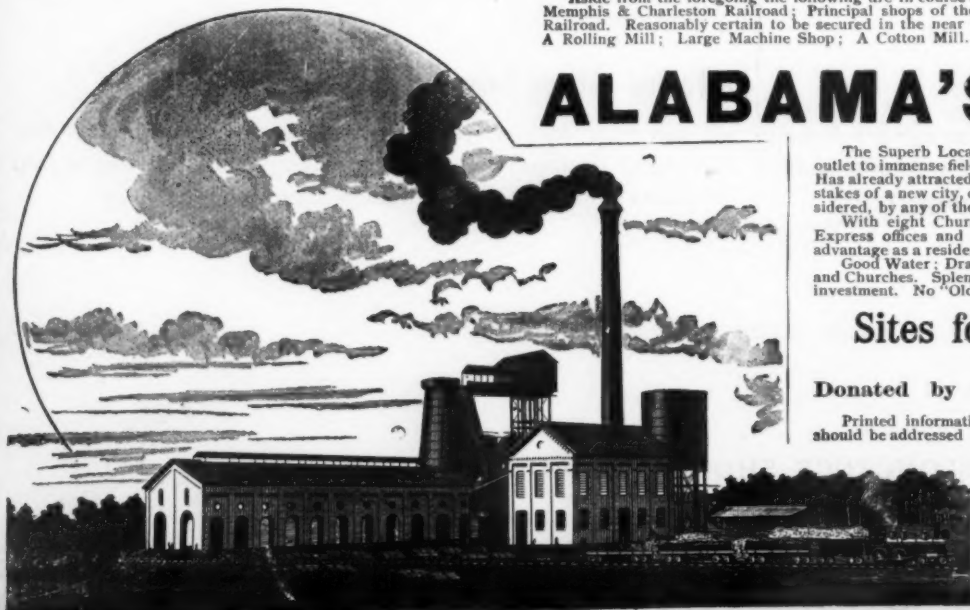
Printed information furnished on request. Correspondence solicited. Communications should be addressed

**W. L. CHAMBERS,**

Vice-President and Manager.

Sheffield Land, Iron & Coal Company,

SHEFFIELD, ALABAMA





# LAREDO, TEXAS.

## The Gateway to and from the Republic of Mexico

Is nature's grand outlet for the manufactured products of the United States and nature's grand inlet for the mineral and raw products of Mexico. For the cheap delivery of the raw material necessary for the successful operation of iron and all textile industries, Laredo holds a position unsurpassed, every material being found in the immediate neighborhood. The very foundations of the city are upon inexhaustible coal beds, now being rapidly developed. A glance at the map will show that there are no large cities within hundreds of miles of Laredo, and her favorable geographical location, being from 600 to 800 miles nearer the trade centers of both republics than any other frontier port, stamps her as the commercial entrepot between the United States and Mexico.

Laredo is becoming a most important manufacturing point,

having the following industries already located and in operation:

Woolen Mill.  
Wool Scouring Mill.  
Tannery.  
Boot and Shoe Factory.  
Ore Concentrating Works.  
Ore Sampling Works.  
Cotton Gin and Milling Works.  
Mineral Water Bottling Works.  
Four Ice Factories.  
General Car and Machine Shops of the Mexican National Railroad, the largest west of the Mississippi.  
Three Large Brick-yards and several smaller establishments.  
A large Cotton Factory is now being erected by a New England syndicate.

Laredo Offers to the Capitalist, Merchant, Manufacturer and Mechanic Opportunities for Investment, Business or Manufacturing such as no other City in the Southwest can offer.

The city is well supplied with railroad facilities and hotel accommodations, has Holly system of water works, two electric-light companies and one of the best equipped electric motor street railways in the United States.

Population.		Imports and Exports.
1886.....	3,000	
1888.....	6,000	1888.....\$ 3,000,000
1889.....	12,000	1889..... 10,543,000

*For Maps, Pamphlets, Bird's Eye Views and Reliable Information of Laredo, address*

# THE LAREDO IMPROVEMENT CO.

# FOR SUCH INDUSTRIES AS

COTTON MILLS,  
WOOLEN MILLS,  
TANNERIES,  
BOOT AND SHOE FACTORIES,  
HARNESS AND SADDLE FACTORIES,  
FURNITURE FACTORIES,  
CARRIAGE AND WAGON FACTORIES,  
FLOUR MILLS,  
GRIST MILLS,  
CRACKER FACTORIES,  
CANNING FACTORIES,  
COTTON-SEED OIL MILLS,

# DALLAS, TEX.

Is equal to any locality  
in America in its  
combined advantages of  
**CHEAP AND  
ABUNDANT  
RAW MATERIAL  
READY,  
PROFITABLE  
AND EXPANDING  
MARKET.**  
DISTRIBUTING FACILITIES  
ELIGIBLE SITES,  
GOOD CLIMATE.

Any worthy industries  
will be aided liberally by the

## DALLAS MANUFACTURERS' AID & IMPROVEMENT CO.

711 Main Street, Dallas, Texas.

## THE PLACE FOR FACTORIES.

## THE ROANE IRON CO.

WILL BUILD UP A

## \* LARGE MANUFACTURING CITY \*

AT

## ROCKWOOD, TENN.

AND IS PREPARED TO OFFER SUBSTANTIAL INDUCEMENTS TO MANUFACTURERS.

—AS TO RESPONSIBILITY OF THIS COMPANY, PARTIES ARE REFERRED TO EITHER DUNN OR BRADSTREET.—

FOR PARTICULARS ADDRESS

ROANE IRON CO., Rockwood, Tenn



# LURAY, Virginia.

2,500 Acres Town Lands,

8,000 Acres Mineral Lands,

Luray Inn and Caverns.

## The Valley Land & Improvement Company,

Capital Stock, \$2,000,000.

Luray, Page County, Va.

### DIRECTORS.

D. F. KAGEY, Luray, Va., President.

G. C. MARSHALL, Uniontown, Pa., Vice-President and General Manager.

T. E. McCORKLE, Lexington, Va.

DR. W. L. HUDSON, Luray, Va.

G. K. MULLIN, Philadelphia, Pa.

DR. A. M. HENKEL, Staunton, Va.

J. W. MILLER, Mount Jackson, Va.

### EXECUTIVE COMMITTEE.

D. F. KAGEY,

G. C. MARSHALL,

T. E. McCORKLE,

G. K. MULLIN.

Secretary, T. E. McCORKLE.

Treasurer, H. M. KERR, Kagey & Co.'s Bank.

Attorney, T. E. McCORKLE.

Associate Counsel, H. J. SMOOT,

Manager of Inn and Caverns, G. K. MULLIN.

Bankers, D. F. KAGEY & CO., Luray, Va.

### CHARTER, PROPERTIES, &c.

The Valley Land & Improvement Company has been organized under the most liberal charter ever granted by the State of Virginia.

2,500 acres for manufacturing purposes and building sites. These lands are in and around the hotel, caverns and town of Luray on an undulating plateau, protected on either side by the Massanutten Mountain and the Blue Ridge Mountains.

8,000 acres of the best mineral properties in Virginia, consisting of iron, manganese and other valuable minerals which have stood the test of examination by the ablest geologists of the country.

The company owns the celebrated Luray Inn and the Luray Caverns.

Page County stands at the head of the list as having a greater variety of minerals and richer than any other county so far as known in the State.

In addition we have the finest kind and a great variety of virgin timber and fire-clays, slates, beautiful marbles, ochres, umber and mineral paints.

### LOCATION, RAILROADS, &c.

Luray, now a town of about 2,500, is the county seat of Page county, has five churches, splendid schools, fine stores, three newspapers, flouring mill, cigar factory, &c.

The town is on the Shenandoah Valley Railroad, of the Norfolk & Western system, and is the best location in Virginia, four hours from tidewater.

Two new lines projected connecting closely with Baltimore and Washington and insuring cheap freights.

Luray has largest tannery in the world, annual pay roll over \$350,000.

Inexhaustible water supply, agricultural resources, charming climate.

Fine natural sites for furnaces and manufactories of all kinds fronting the railroad, reserved by the company, which by donations of land and in every possible way will promote Luray's manufacturing interests.

### LOTS, CAPITAL STOCK, &c.

Capital stock \$2,000,000, shares \$100.

One million of stock reserved in treasury for betterment.

One million now offered for sale.

Books open at the bank of D. F. Kagey & Co., Luray, Va.

The company reserves the right to close the books any time before the full amount of the one million is sold.

Twenty per cent. must be paid on subscription, 20 per cent in 30 days, the balance equally in six and twelve months.

When half of the subscription is paid in subscribers have the right to use their stock in payment on lot purchases.

The company feels safe in saying that with the magnificent property in hand, the Inn and Caverns, it will be enabled when thoroughly under way to pay four or five per cent. dividend on the stock sold, independent of lots and mineral lands.

The company already owns an electric plant which will be considerably enlarged.

Complete system of water works and many other improvements projected. Investors are referred to Mr. J. W. Wheeler, Cashier Drivers and Mechanics' National Bank, Baltimore, Md., for full information. H. C. Turnbull, Jr., real estate agent 52 Lexington street, will receive subscriptions of stock in Baltimore.

The fullest investigation invited.

THE VALLEY LAND & IMPROVEMENT COMPANY, LURAY, PAGE COUNTY, VA.

# DENISON, TEXAS.

The Queen City of the Southwest

AND

## GATEWAY TO THE GREAT STATE OF TEXAS.

The City of Denison Presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

**D**ENISON is situated in Northeastern Texas near inexhaustible beds of Coal and Iron, surrounded by the finest Fruit Lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The Houston & Texas Central Railway has its northern terminus here. The Choctaw Coal & Railway Co. have recently completed a survey of a line from Hartshorn, I. T. (a junction point with the main line of their road) to this city. The Denison, Sherman & Dallas Railway is now being constructed from here to Sherman, and four other roads have located lines to this point, with very good prospects of building.

The first public school in the State was established here, and the city's elegant two and three-story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year. We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works. Rate of taxation low.

The city has six miles of street railway, and a seven-mile-motor railway; has an electric-light and gas company and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

The erection of a large hotel to cost \$125,000, and a steel plant with \$2,000,000 capital is contemplated.

The population of the city by census of 1890 shows a gain of 170 per cent in ten years.

35,000 bales of cotton were shipped from Denison in 1890, and many carloads of fruit and early vegetables are shipped annually.

The Denison Canning Co., capitalized at \$100,000, has one of the largest canning factories in the country.

The Denison Cotton Manufacturing Co.'s 25,000-spindle mill, to cost \$500,000 and to employ 650 hands, will be completed by January 1st, 1891.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory is now increased from a daily output of 30 to 50 tons.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

## THE DENISON LAND & INVESTMENT CO.

Paid-Up Capital, \$1,200,000.

DENISON, TEXAS.

### OFFICERS.

W. P. RICE, President.

MILTON H. FRENCH, Vice-President.

B. J. DERBY, General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

### DIRECTORS.

W. P. RICE, Kansas City, Mo.

J. M. FORD, Kansas City, Mo.

SAM STAR, Denison, Tex.

MILTON H. FRENCH, Thomaston, Me.

B. J. DERBY, Burlington, Vt.

ARTHUR L. BERRY, Denison, Tex.

M. V. B. CHASE, Augusta, Me.

B. C. MURRAY, Denison, Tex.

JOS. B. LINCOLN, Boston, Mass.



Write to the \* \* \* \*

*The  
Richest.*

*Best  
Managed.*

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*Greatest  
Resources.*

*Unequalled  
Opportunities.*

\* \* \* \* Coal & Iron Co.

CARDIFF, ROANE CO, TENN

# Come to HAGERSTOWN,

## Third Great Sale of Lots

CONDUCTED BY  
**J. CLENN COOK & CO.**  
BALTIMORE, MD.

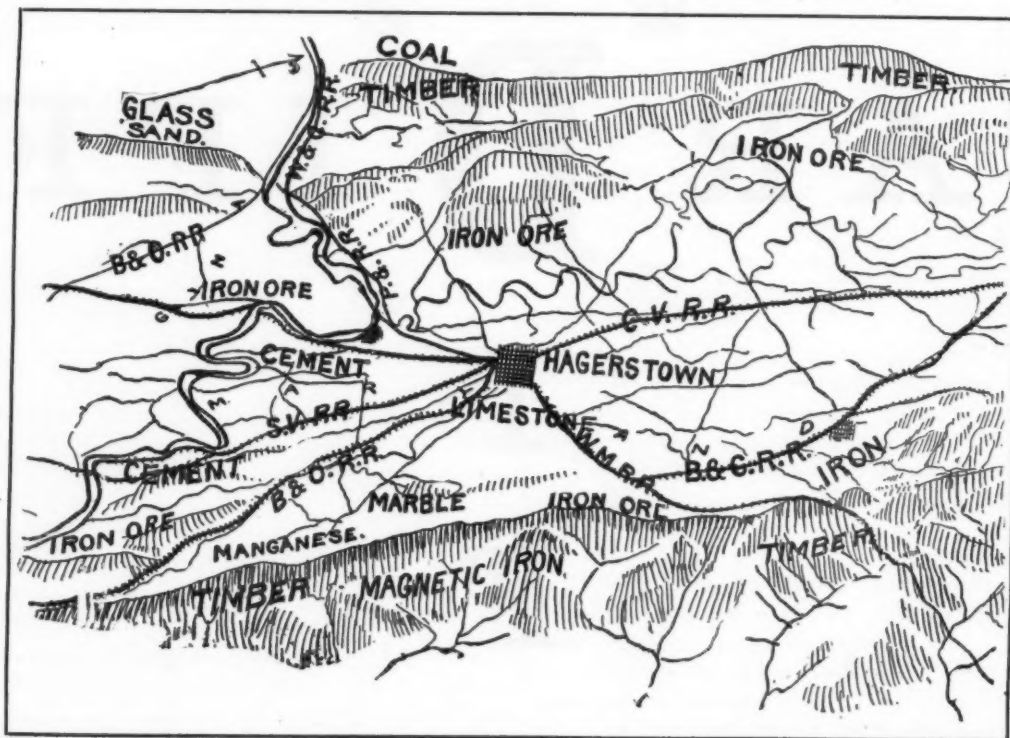
**December 9th and 10th.**

**THE MAGIC CITY OF MARYLAND.**

Where Money Grows Rapidly. The Interstate Metropolis. Population in 1884, 5,000. Population in 1890, 11,000.

Her Growth Marvelous. Her Future Magnificent. 6 Railroads. Fifty Passenger Trains Daily (50.) Thirty-nine Mail Trains Daily (39). Unsurpassed for Manufacturing Facilities—95 already located, 6 in the last three months.

Its location commands the trade of Maryland, Virginia, West Virginia and Southern Pennsylvania. Substantial assistance given to manufacturers to locate here. Has magnificent Hotels, firm and well-graded Streets, Electric Lights, Pure Mountain Water and Free Postal Delivery.



*Ores, Timber and Agricultural Products*

*Cheap and in the Greatest*

*Abundance.*

*Manufacturing Locations.*

*Every Desirable Advantage here for all who are seeking Homes, Business, or*

This contour map shows the location and railroad facilities of Hagerstown, in the "Garden Spot" of the Cumberland Valley.

## Hagerstown Manf'g., Mining & Land Improvement Co.

WASHINGTON COUNTY, MD., REAL ESTATE DEALERS,

**Own and Control about 1,000 Acres of Land adjoining the City Limits.**

Capital Stock,	-	-	-	-	\$1,000,000
Remaining in Treasury,	-	-	-	-	575,000

### OFFICERS.

PHARES M. MISHLER, Pres't.	R. M. KEEDY, Secretary.
J. D. MAIN, Treasurer.	H. H. STRAUB, Acting Sec'y.

### DIRECTORS.

CHAS. W. SEBOLD, President, and Manager of the Hagerstown Spoke and Bending Works.  
S. M. SCHINDEL, President and Manager of the United Silk Mfg. Co.  
PHARES M. MISHLER, President and Manager Inter-State Fencing Co.  
J. HANSON BEACHLEY, Wholesale and Retail Merchant.  
CORNELIUS L. KEEDY, Proprietor and President of Kee Mar College.  
REUBEN M. KEEDY, formerly in the Wholesale Notion Business.  
J. D. MAIN, Merchant and Secretary of the Hagerstown Hedge & Fencing Co.  
ALEX. R. HAGNER, Counsellor-at-Law and Attorney for Second National Bank.



# Cedar Grove Industrial Company.

Chartered Under the Laws of West Virginia.

CAPITAL - - - \$500,000.

## OFFICERS:

ROBERT A. WOOLDRIDGE, PRESIDENT.

ELLIOTT BARD, TREASURER.

CHAS. C. TOMPKINS, VICE-PRESIDENT.

CHAS. H. GRASTY, SECRETARY.

## DIRECTORS:

ROBERT A. WOOLDRIDGE, R. A. Wooldridge &amp; Co., Importers and Manufacturers of Fertilizers, Baltimore.

CHAS. C. TOMPKINS, Secretary West Salem Land Co., Salem, Va.

ELLIOTT BARD, Bangs, Bard &amp; Co., Wholesale Boots and Shoes, Baltimore.

CHAS. H. GRASTY, Manufacturers' Record, Baltimore.

WARREN C. BIRD, J. Edward Bird &amp; Co., Wholesale and Retail Dry Goods, Balto.

JAMES THURSTON, Fertilizer Materials, Storage, &amp;c., Baltimore.

GEORGE ALLEN, President West Salem Land Co., Salem, Va.

DR. JAMES BOSLEY, Physician, School Commissioner 14th Ward, Baltimore.

GEORGE W. KIRWAN, Gents' Furnishings, Baltimore.

## ATTORNEYS:

WATTS &amp; ASHBY, CHARLESTON, W. VA.

RHODES &amp; RHODES, BALTIMORE, MD.

THIS Company holds contracts of purchase for about 165 acres of town-site property, including water front, and 1,300 acres of coal land immediately adjacent, where the present town of Cedar Grove, Kanawha County, W. Va., is now located, at the Junction of Kelley's Creek with the Kanawha River, about midway between Kanawha Falls and Charleston.

## POSITION AND TRANSPORTATION.

Cedar Grove, which this company acquires, is the controlling point and sole outlet of the Kelley Creek basin, the area of which is 64 square miles. This is the backbone of the great Kanawha coal field, and is conservatively estimated to contain several billion tons of coal, all of which must be tributary to Cedar Grove, which, with its riparian rights, and the ample facilities which this company will provide, will be in a position to materialize its extraordinary natural advantages. The valley of Kelley's Creek, which extends through the back country, affords the only means of getting the coal out to transportation, owing to the mountainous country, and this company owns the level land at the mouth of the creek, where nature has made one of the few town-sites to be found on the north side of the Kanawha between the head of navigation and Charleston, the mountain sides uniformly coming down to the river and leaving scarcely enough room for a railroad track. At Cedar Grove, however, the creek has made a valley wide enough for a town of no mean proportions.

The company owns two miles of water front, from which the entire output of a rich area, containing many millions of dollars worth of coal, must be loaded on barges for shipment to market. This advantage alone makes the capital stock of the company seem insignificant. The question as to how our riparian rights shall be used—whether they shall be sold at from \$3,000 to \$5,000 an acre, the present market value, or held by the company and tipples and other facilities erected and operated, thus affording a large and permanent revenue, is one for the discussion and decision of the company after it is fully organized. The transportation feature is very satisfactory. Our water front is on a deep pool, between two locks in the river, thus giving ample harbor room, with all-the-year-around navigation to Cincinnati, Louisville and the Ohio and Mississippi Valley. Cedar Grove enjoys the wonderfully low rate of 2 mills per ton per mile, and the tariffs of the Chesapeake & Ohio just across the river are, it is claimed, the lowest in the United States. The Kanawha & Michigan Railroad is within a few miles of Cedar Grove, and building toward it on the north side of the river. It will thus be seen that the company will have rare transportation advantages.

## TOWN-SITE.

Included in the company's property is the town-site of 165 acres of land admirably adapted for residence and business purposes. The smallness of this area compared with the site of many new towns is a decided advantage, as it compels a concentration of all business in a more limited space, and makes it impossible to have a town scattered over ten times as much ground as will be needed for years to come. On this account it greatly enhances the value of every lot on the property. There will be about 1,000 lots, which, at the very conservative estimate of \$300 each, would yield \$300,000.

## COAL LANDS.

Our 1,300 acres of coal lands are estimated to contain in the several veins an aggregate of over 60,000 tons per acre. There are seven horizontal, workable veins, all of which have been worked at one or more points. The coal has an established reputation for steam and domestic uses. There is an abundance of good coking coal. All the coals are mined at a minimum of expense and under almost ideally favorable conditions. The coal property, it is believed, can easily be made to pay a good profit on the entire capital stock, as owing to its superior quality, there is a ready market for all that can be mined. One vein of this coal is preferred by large manufacturing concerns over the best grades of Pennsylvania steam coals; and another vein of this coal is pronounced by the gas works of a large Western city to be the best gas coal that they have ever used.

## PRESENT IMPROVEMENTS, CLAY, STONE, &amp;c.

The improvements on the coal property consist of a large double, two-story brick store; cost about \$6,000. From 40 to 45 miners' houses, regarded as

among the best miners' houses in the valley. The railroads, tipples, &c., are in good order. The output of one vein from May, 1888, to May, 1889, was in excess of two million bushels. On the coal property proper there is about half a mile of river front, and on the other property about a mile and a half, with two miles of railroad frontage on the Kanawha & Michigan road, which is to pass through the place.

On the mill property there is a three-story roller flour mill with a five-story elevator, recently refitted with improved machinery at a cost of about \$17,000. The mill is within 50 feet of the railroad on the one side and 150 feet of the Kanawha river on the other side. There are one good dwelling house for the miller, two good tenement houses for mill hands, a cooper shop, an inclined plane to the river, and all appurtenances for the running of a flour and grist mill.

On the coal property there are three blacksmith shops, necessary for the coal mine.

Near the drum house at the mouth of the mine is a large 30-horse power engine, with fans attached for supplying air for ventilation of the mine.

In addition to the coal on the 400 acres, bought from H. P. Tompkins, there is a large vein of white sandstone immediately on the river front, which is very valuable for building purposes, easily cut, and hardens when exposed to atmospheric influences. From actual tests made in Washington city by the government engineers, this sandstone stood a greater degree of hydraulic pressure without crushing than any sandstone that had ever been experimented upon by the government officials.

A clay for manufacturing brick found upon the bottom land is unsurpassed by any brick clay found in the Kanawha valley. The depth of this clay is as great as 20 feet, commencing within a foot and a half of the surface.

A clay found in the bottom of the Cedar Grove vein is in every respect suitable for fire-brick and tiling, it having been thoroughly tested. This is produced without cost, as in operating the mine it can be taken out without adding to the expense of operation.

Thus, the company will own at the start—of revenue-producing assets—a coal property in profitable operation, a large flour mill doing an excellent business and having an established trade, a \$6,000 brick store building and forty or fifty miners' houses in good condition. In addition to this will be the town-site of 165 acres, 50 to 100 villa lots on the hillsides, the 1,300 acres of coal land and the riparian rights of two miles of water front.

## SUBSCRIPTIONS TO THE CAPITAL STOCK.

There will be \$400,000 of the capital stock available for subscription, or 40,000 shares at \$10 each. Assessments will be as follows: \$1.25 per share November 15, 1890, \$1.25 January 15, 1891, \$1.25 per share June 15. There will then be no further assessments until Nov. 1, 1891, and from that time on, it is guaranteed that should it be found necessary to make other assessments they shall not exceed 20% per annum on the stock subscribed.

The policy of the company will be to limit assessments to actual necessities in meeting deferred payments and in developing the property. It is possible that the June assessment referred to will not be called for, as the sale of lots which will take place in the spring is likely to realize sufficient money to take care of deferred payments and provide ample funds for developments. The company, however, wishes to put itself in position to carry out all its plans, regardless of the sale of lots. It is a reasonable expectation that the subscriber will never be called on to pay any assessments beyond the first three.

Subscriptions must be made in writing, must state the name and address of the subscriber, and the amount subscribed. No subscription will be accepted for more than 1,000 shares for any one subscriber. For further information call on or address

ROBERT A. WOOLDRIDGE, President,  
CHAS. H. GRASTY, Secretary,  
ELLIOTT BARD, Treasurer,  
Or CHAS. C. TOMPKINS, Vice-President, } Baltimore.  
Salem, Va.

Principal Office, - 212 BUCHANAN'S WHARF, - Baltimore, Md.

# SAVERNAKE,

Rockbridge County,

VIRGINIA.

—\* The Latest and Most Attractive Addition to Buena Vista. \*

The Phenomenal Success of which New Industrial City has made Necessary Future Extensions on the same line of Valuable Minerals,

**WITH UNRIVALLED FACILITIES FOR TRANSPORTATION.**

SAVERNAKE adjoins Buena Vista on the southwest; fronts on Shenandoah Valley Railroad and on James River Division of the Chesapeake & Ohio Railway.

High Grade Manganese and Iron Ores to Steel and Iron Trades.

\* **SAFETY AND PROFIT TO INVESTORS.** \*

Healthy and Picturesque HOMES at Moderate Prices to Lot Buyers.

The Advantages of an Established City, with Churches, Schools and Factories adjoining. Employment for Mechanics and Laborers. Active Trade to the Storekeeper. Consuming Industries, with a Ready Market for product to the Manufacturer. Avenues connecting with those of Buena Vista, to insure Convenient Access, through Street Car Lines, already Projected from that City.

## SAVERNAKE

Is laid out in conveniently-sized lots to suit all in Prices and Location.

RESIDENCE LOTS. BUSINESS LOTS. MANUFACTURING SITES.

THE INDUSTRIES already secured, and which will be further announced weekly in the MANUFACTURERS' RECORD, guarantee rapid profits, free from speculative features, to all purchasers.

The **LOCH LAIRD ESTATE & MINERAL CO., Limited,**  
LONDON, ENGLAND,

Of whose property Savernake forms a portion, having already sold a considerable number of lots to investors in London, and being in negotiation with both English and American capitalists for further sales, offer lots in Savernake to the American public, confident that their location will render values at once apparent, and guarantee every effort to sustain and foster this enterprise, both in the United States and England. Maps of Savernake and all particulars of information may be obtained upon application to

## Loch Laird Estate & Mineral Co., Limited,

THOMAS DUNLAP, MANAGING DIRECTOR.

Postoffice Address—Triford, Rockbridge Co., Va.

**SAVERNAKE, VIRGINIA.**

Railroad Station for both Shenandoah Valley Railroad and Chesapeake & Ohio Railway, Loch Laird Station, Va.



# SAVERNAKE,

Rockbridge County,

Virginia.

THE PROPERTY OF THE

## Loch Laird Estate & Mineral Co., Limited,

of which Savernake is a part, is in active development, having extremely rich and valuable deposits of

*MANGANESE, IRON ORE,  
CEMENT ROCK, BROWN STONE, BRICK AND FIRE-CLAY,  
BUILDING STONE, KAOLIN.*

Arrangements have been concluded, or are in course of negotiation with the following

### INDUSTRIES:

Tin-Plate Works, product 3,500 boxes I. C. Tin-Plate weekly.  
Ferro-Manganese Furnace.  
Ornamental Brick and Tile Works.  
Slate Brick Works—patented process.  
Manganese Grinding Works.  
Cement Kilns and Mill.  
Planing Mill and Woodworking Mill.  
Iron Foundry and Machine Shop.

### WITH THESE ARE PROJECTED:

An Eighty-Ton Blast Furnace.  
A Coke Plant.  
An Open Hearth Steel Plant, with Plate Mill and Galvanizing Works.

In addition to the foregoing, the following industries have been offered during the past week:

AN IRON BRIDGE WORKS, employing 600 hands.  
LOCK FACTORY, HARDWARE FACTORY and a very large  
MALLEABLE IRON WORKS from New England.

## SALE OF LOTS.

The favor with which Savernake has been received has enabled the company to announce the sale to a syndicate of

### SEVEN HUNDRED LOTS,

Equitably distributed throughout the town plot. These lots compose the most

### Desirable Residence and Building Lots,

with superior location and magnificent views.

RESIDENCE LOTS, 50x125 feet, 50x175, 50x200 and of larger size when desired.

## BUSINESS LOTS.

The map of Savernake contains

### TEN BLOCKS OF BUSINESS LOTS.

Fronting on the Industrial Reservation and on Savernake, Victoria and Brudenell Avenues. Many of these have been sold, and at present prices offer a most desirable opportunity for profitable investment.

ESPECIAL RESERVATION OF LOTS FOR MECHANICS AND WORKINGMEN  
desiring to build houses. Equitable prices and  
easy terms of payments.

# BUENA VISTA'S FIRST GREAT LOT SALE

WEDNESDAY and THURSDAY, NOVEMBER 19 and 20

SOLID. SUBSTANTIAL. PEERLESS.

Everybody Who Desires to Make a Safe and Paying Investment Should Attend.

500 BEAUTIFUL LOTS IN THIS GROWING CITY WILL BE PLACED UPON THE MARKET AT AUCTION BY THE COMPANY.

**100 VALUABLE BUSINESS LOTS WILL BE OFFERED AT THIS SALE.**

A minimum price will be placed on them and same made public on day of sale.

A LUNCH WILL BE SERVED ON THE GROUNDS TO VISITORS.

The prices of Buena Vista lots have advanced 100 per cent. every ninety days during the last twelve months. Industries to the amount of \$2,161,800 have been secured, with immediate prospect for \$1,000,000 more.

**IN TEN YEARS THERE WILL BE A POPULATION OF 25,000 PEOPLE.**

Buena Vista boasts of a more varied line of industries than any other location in Virginia, whilst the manufacture of Iron, Steel, Glass and Paper on a large scale is distinctive, yet there are large establishments in Woolen Goods, Leather, Fire-Brick, Sewer-Pipe, Tin Goods and a varied line of Wooden Factories, including a Wagon Factory and Furniture Factory. Buena Vista is not dependent upon any one line of manufacturing interests.

## THE FOLLOWING IS A LIST OF THE INDUSTRIES SECURED AND IN OPERATION:

Iron Furnace, completed.....	\$300,000	Buena Vista Building & Investment Co., Bankers.....	\$ 81,000
Pulp and Paper Mills, in operation.....	100,000	Buena Vista Building & Improvement Co.....	80,000
Saddle and Harness Factory, in operation.....	10,000	Buena Vista Advocate and Job Office, in operation.....	5,000
Fire-Brick Works, in course of construction.....	100,000	Egg Crate Factory, completed.....	50,000
Steam Tannery, in operation.....	100,000	Lexington Investment Co., in operation.....	100,000
Planing Mills and Lumber Yards, in operation.....	20,000	Virginia Real Estate Investment Co., in operation.....	100,000
Furniture and Chair Factory, in operation.....	10,000	Three Livery Stables, in operation.....	10,000
Red Brick Works, in operation.....	30,000	Engine and Boiler Plant, building.....	300,000
Wise Wagon Works, in operation.....	25,000	Basic Steel Works, organized.....	300,000
Wire Fence Factory, in operation.....	10,000	Sash, Door and Blind Factory.....	50,000
Woolen Mills, completed.....	70,000	Planing Mills and Woodworking Establishment.....	100,000
Electric Light Plant, in operation.....	10,000	Glass Works, organized.....	200,000
First National Bank of Buena Vista, in operation.....	50,000	Total.....	\$2,221,000

**VARIED INDUSTRIES:** In addition to the industries above enumerated a large number are being negotiated for, and will probably be located before the day of sale of lots, among the number a Muck Bar Mill, a Rolling Mill and a Nail Works.

All Sales are made through the Buena Vista Real Estate Exchange, whose members are authorized to make terms with other agents or agencies.

**TERMS:** One-third Cash, Balance in One and Two Years.

MAPS AND DETAILED INFORMATION CAN BE OBTAINED BY APPLYING TO

**J. D. ANDERSON, Secretary.**

**A. T. BARCLAY, President.**



# The Middlesborough Town Company,

ALEX. A. ARTHUR, President.

JOHN B. CARY, Sec. and Treas.

Fourteen months ago the population of the present site of Middlesborough, Ky., did not exceed 50; to-day the town has a population exceeding 6,000. It is a conservative estimate to say that in three years 50,000 people will be living here. The amount of capital now invested in the development of Middlesborough reaches

## \$26,500,000.

The history of the world does not show an instance of such amazing development in so short a time and on so sure and solid and permanent a foundation.

The developments here are in the hands of English capitalists, whose purpose it is to create around Cumberland Gap the greatest coal and iron development the world has ever known.

## Statement of Development to September 1, 1890.

	Number.	Value.
Business houses erected and occupied.....	83	\$ 285,000
Business houses being erected.....	41	441,500
Business houses contracted for, to be completed by Jan. 1, 1891. 31		176,500
Residences erected and occupied.....	280	417,250
Residences being erected.....	97	228,450
Residences contracted for, to be completed by January 1, 1891. 72		161,450
Industrial plants in operation.....	16	289,500
Industrial plants building.....	27	2,872,500
Industrial plants contracted for.....	14	750,000
Hotels built and occupied.....	7	132,000
Hotels being erected (including Harrogate and Cumberland Gap).....	6	850,000
Hotels contracted for.....	3	45,000
Churches completed.....	5	22,500
Churches being erected.....	3	18,000

### PUBLIC BUILDINGS.

Schoolhouse.....	3,500
Public library and exhibition hall.....	25,000
City hall.....	10,000

The above statement includes only cost of construction, and does not include working capital or value of properties or stock.

### BANKS.

	Capital.	Deposits.
Coal & Iron Bank.....	\$1,000,000	\$430,000
First National Bank (to be increased to \$100,000).....	50,000	160,000
People's Bank.....	500,000	120,000
Bank of Middlesborough (to be increased to \$100,000)....	50,000	60,000
Bank of Cumberland Gap.....	50,000	17,000
Bank of Claiborne .....	25,000	10,000
Total.....	\$1,675,000	\$797,000

### POPULATION.

The population of Middlesborough was fifty souls in May, 1889. In August, 1890, about 6,200. Including the plants that are now completed and those that are in course of construction, which, by contract, are to be completed inside of fifteen months, Middlesborough will have a working population, composed of skilled and unskilled labor, of 7,688 men, which, according to all acknowledged rules, will give the city in eighteen months nearly 40,000 inhabitants.

### NOTE.

Two years ago the nearest railroad was at Corbin, on the Louisville & Nashville System. To-day there are in Middlesborough the Louisville & Nashville, the Knoxville, Cumberland Gap & Louisville Railroads, the Belt Line and, by traffic arrangements, the Norfolk & Western and the East Tennessee, Virginia & Georgia Roads, with others building.

FOR CIRCULARS AND ALL OTHER INFORMATION ADDRESS

JOHN M. BROOKS, Resident Manager,  
MIDDLESBOROUGH, KY.

## Circular No. 4.

Office of **The Grottoes Company,**

*Shendun, Va. (Grottoes Station, Shen. Val. Ry.), Sept. 22, 1890.*

### **To the Stockholders of The Grottoes Company :**

The management of your Company takes this method of informing you that the 15,000 shares of its stock offered for sale by Circular No. 3, of July 14th, were all sold by the 15th of September, and that offers were subsequently made for many thousand more. Our stock is now in demand at a very considerable premium.

To protect your individual interest, as well as those of the Company, the management orders as follows:

*First.*—All the issue of Stock offered for sale by Circular No. 3 from this office having been disposed of, the books for the transfer of the Stock of this Company will be closed at noon, Sept. 24th, 1890, and remain closed until noon of Oct. 24th, 1890, to enable the Company to prepare a list of its stockholders qualified to participate in the public drawing for business and residence lots, which will take place at Shendun, October 14, 1890, beginning at 11 o'clock in the forenoon.

*Second.*—Each person who has paid all the assessments due prior to Oct. 14th on the stock he has subscribed for, will be entitled to draw a lot for each five shares of Stock standing in his name on that date.

*Thurd.*—Maps of Shendun, showing the lots that will be drawn for and those that the Company will offer for sale after the drawing, will be sent to each subscriber before the day of allotment.

*Fourth.*—After the allotment has been made, the Company will offer a number of alternate lots for sale at auction on that and the two following days.

We hope you will not only attend the drawing and sale of lots in person, but that you will bring others with you who may become interested in Shendun. Ample provision will be made for trains and for the entertainment of all who come. The street cars will be running for the whole length of Shendun as now laid out.

By order of the Executive Committee.

**Jed. Hotchkiss,**

President.

A. M. Howison, Secretary.



# SUFFOLK, VIRGINIA.

The Manufacturing City of Eastern Virginia.

THE RAILROAD KEY TO THE COAST.

The First Great Auction Sale of Lots ever held.

500 Business and Residence Lots. 500

Excursion Rates from All Points. The Railroad Fare of Every Purchaser of a Lot will be returned.

## 20 INDUSTRIES EMPLOYING 2,500 HANDS

Already in operation. Others about closed, and still more being negotiated for.

These Lots present an absolutely Safe Investment and a certain opportunity to double your money.

**Wednesday, Nov. 19th, 1890,**

**THE EAST SUFFOLK LAND CO.**

Will offer FOR SALE its first addition to the prosperous town of SUFFOLK, VIRGINIA.

The most successful auctioneers in the South, SMITH & PANNILL, have been employed to conduct this sale.

Lots 50x150 feet, fronting on well-graded streets 60 feet wide, with 20 feet alleys. The Atlantic & Danville, Norfolk & Carolina, Seaboard & Roanoke, Norfolk & Western, and Suffolk & Carolina Railways, representing more than 238,000 miles of railway, and the Nansemond river, which is navigable for large vessels, are immediately accessible to these lots.

The policy of THE EAST SUFFOLK LAND CO. is to make every one of its lots desirable by locating industries in different portions of its property, to which end it holds in its treasury more than \$200,000.

A payment of \$100 on account of the cash payment will be required from purchasers on the day of sale, NOVEMBER 19th, 1890, or on receipt of a contract of sale, to be given prior to execution of deeds, which will be prepared as rapidly as possible.

TERMS.—One-third cash, balance in one and two years, evidenced by negotiable notes bearing six per cent. interest from date of sale. The stock of the Company will be received in payment of the lots at fifty per cent. premium.

FOR PLATS, PROSPECTUSES AND FURTHER INFORMATION, APPLY TO

**CHAS. H. JONES, Jr., Secretary, Suffolk, Va.**

Or **SMITH & PANNILL, Auctioneers, Norfolk, Va.**

**REVERSIBLE STEEL & WOOD TRACK HAY CARRIERS**

TRADE MARK. A complete outfit. Easy to put up, always reliable and fully warranted to meet the wants of any farmer.

**MYERS' FORCE AND LIFT PUMPS**

GREATEST IMPROVEMENT OF THE AGE

Simple, durable, powerful, easy to operate never affected by frost. Patent GLASS VALVE, will never corrode. Ask your dealer for our goods. Write for catalogue. F. E. MYERS & BRO. ASHLAND, O.



**Maslin's Patent Steam Pump.**  
Pat. Feb. 14, & Dec. 3, '93.

Cheapest and Best Automatic Steam Vacuum Pump. Handling DIRTY and GRITTY LIQUIDS without Wear, Oil or Care. Simple, Economical, Efficient & Durable. Pumping Plants for Contractors, Irrigation, Water Works, Railroads, Mining & General Hydraulic Purposes. Write or call for Circulars. JOHN MASLIN & SON, Sole Manufacturers, 165-167 1st St., Jersey City, N. J.

Subscribe to the MANUFACTURERS' RECORD.

**COMPLETE STEAM PUMP**  
10 SIZES FROM \$7 TO \$75  
WATER SUPPLY TANKS,  
FIRE PUMPS & ETC.  
WRITE FOR  
PRICES AND  
DESCRIPTIVE CIRCULARS

**VAN DUZEN & TIFT**  
SOLE MAKERS  
CINCINNATI, O.

**S. E. CRAWFORD,**  
NORWALK, OHIO.  
MANUFACTURER OF  
**Rubber Bucket Chain**  
And Wood Force Pump Supplies.  
Correspondence Solicited.



**THE COOK WELL CO.**  
CONTRACTS TAKEN FOR FURNISHING  
**WATER SUPPLY**  
COOK'S SYSTEM OF WELLS.  
18 YEARS EXPERIENCE IN WELL SINKING  
FOR WATER WORKS, RAILROADS,  
FACTORIES, BREWERIES ETC.  
ARTESIAN WELL PUMPS 146  
TUBE WELL SUPPLIES  
Send for Catalogue of Patent Well Material.



**DEAN BROS. STEAM PUMP WORKS.**

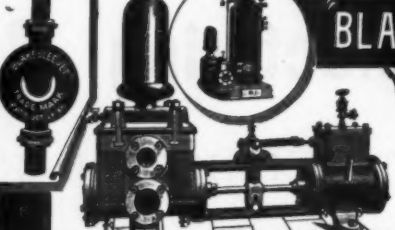


BOILER FEEDER. BREWERS AIR PUMP. FIRE PUMP. DUPLEX PUMP.

**INDIANAPOLIS, IND.**

PUMPING MACHINERY FOR ALL PURPOSES. SEND FOR CATALOGUE AND PRICES.

**BLAKESLEE MFG. CO.**  
DU QUOIN ILL.  
SEND FOR CATALOGUE



**STEAM PUMPS.**

We have just issued a new illustrated catalogue of our Steam & Jet Pumps. A copy will be mailed free on application.

**THE LAIDLAW & DUNN CO.**



STANDARD DUPLEX PUMP AND BOILER. STANDARD COMPOUND STEAM PUMP. STANDARD DUPLEX STEAM PUMP. HERO POWER PUMP.

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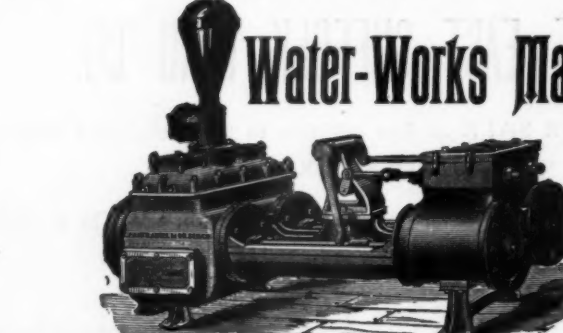
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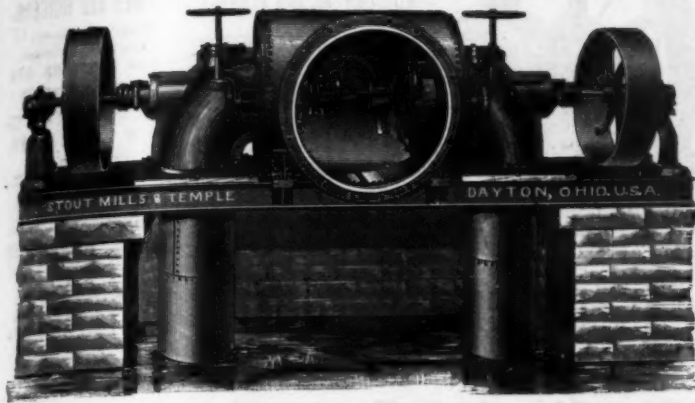
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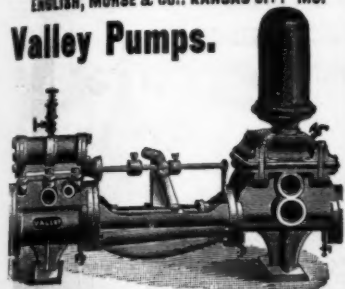
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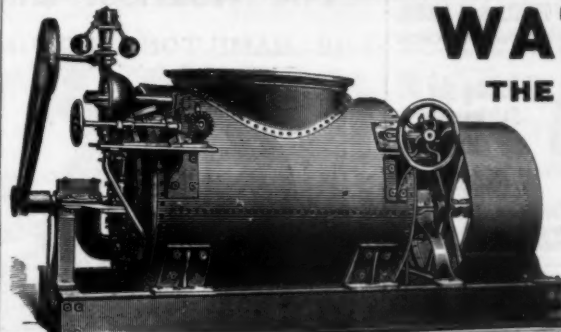
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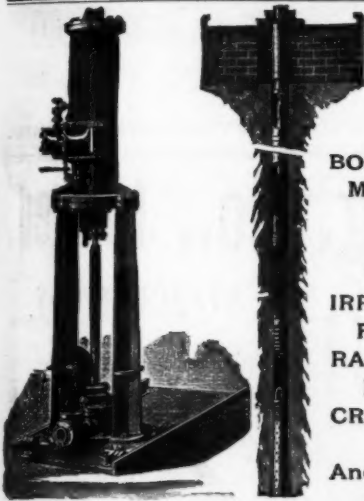
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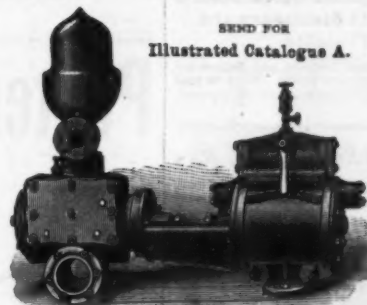
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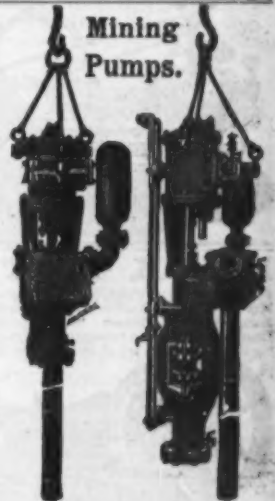
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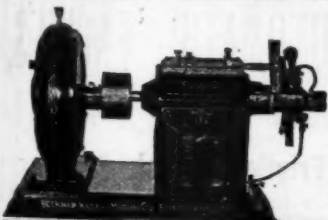
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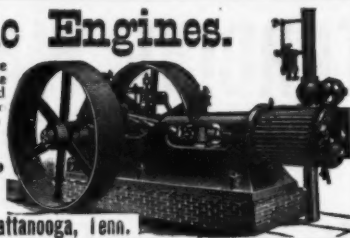


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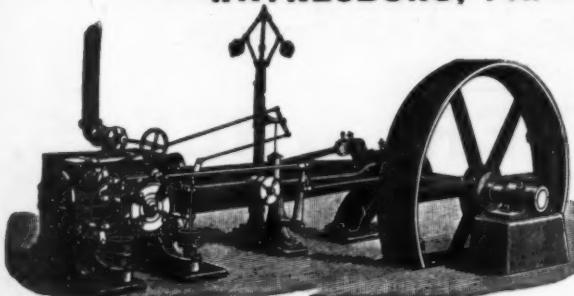
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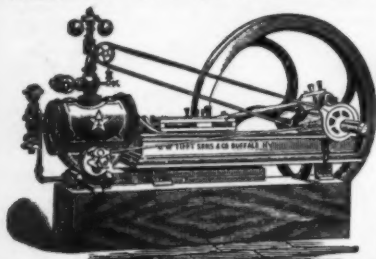
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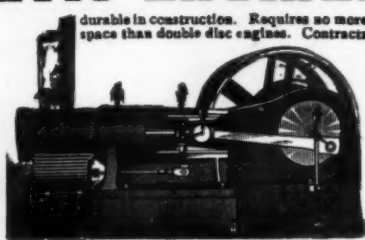
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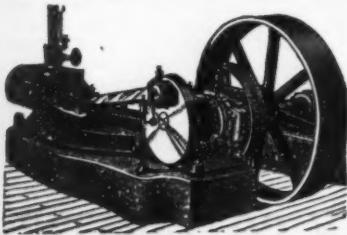
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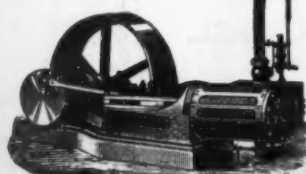
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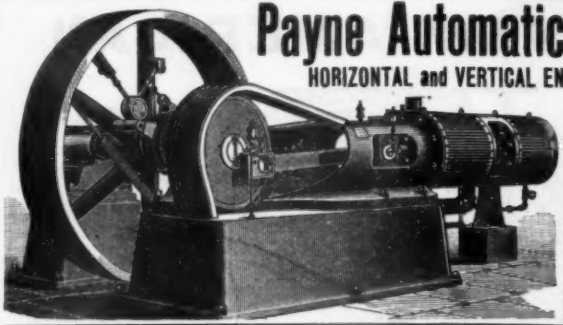
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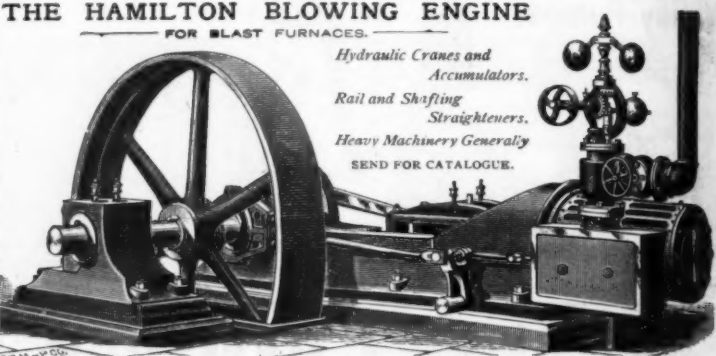
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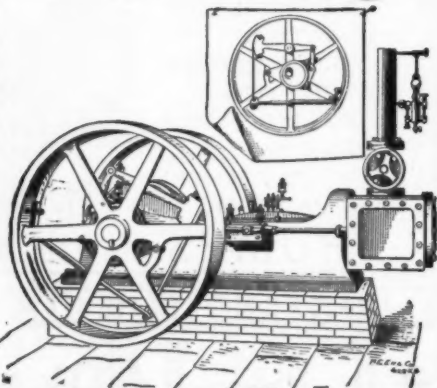
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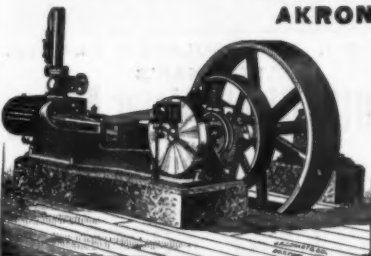
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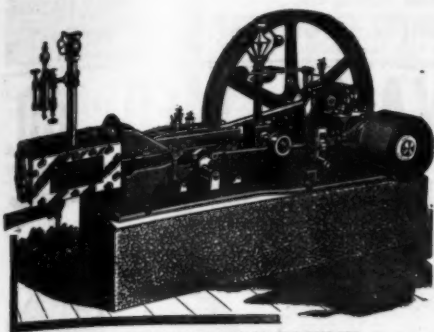


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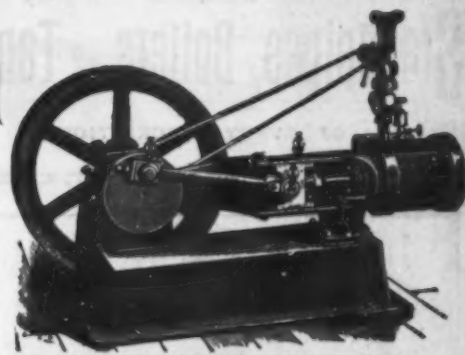
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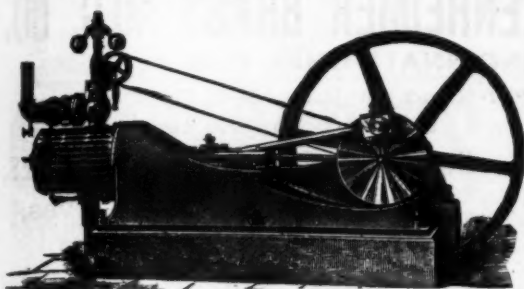
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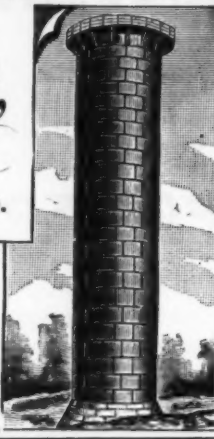
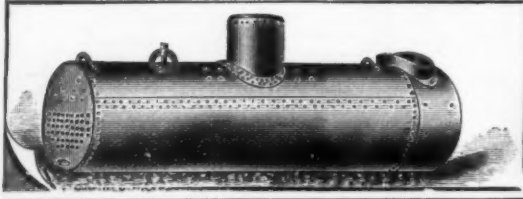
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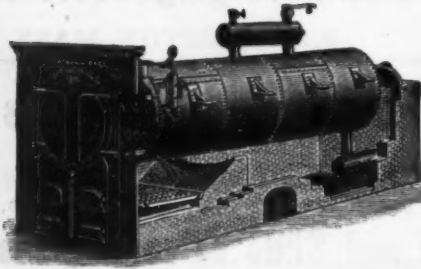
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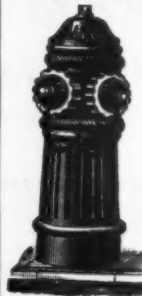
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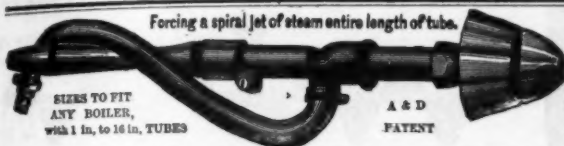
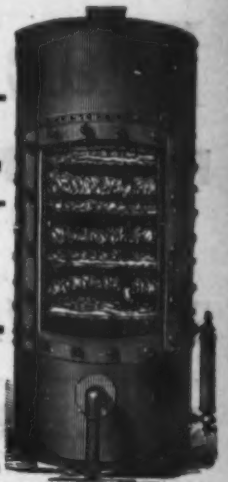
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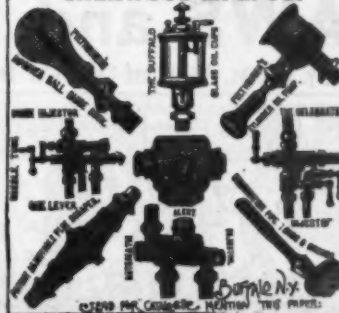
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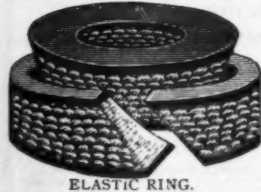
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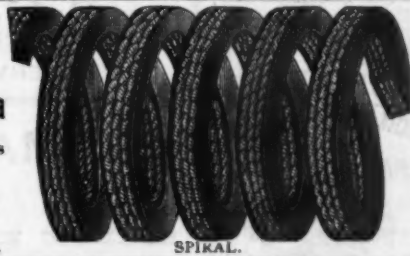
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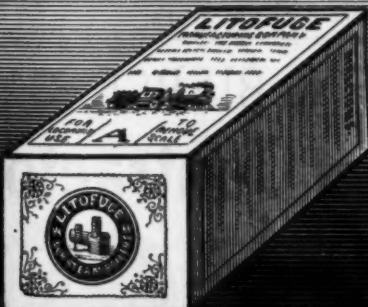
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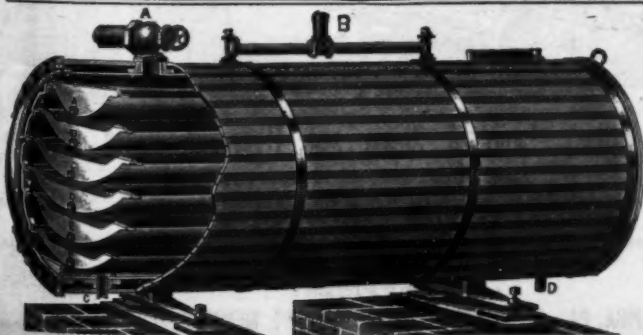
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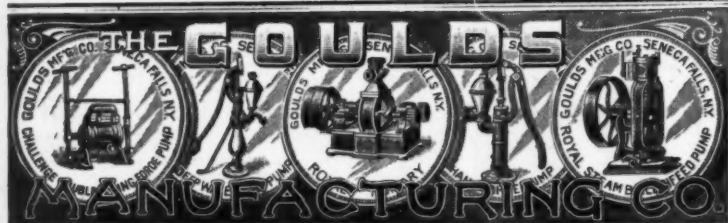
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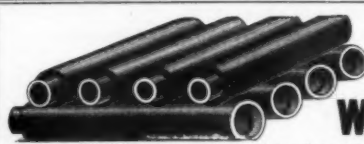
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## Railroad Construction

Asheville, N. C.—Street Railway.—The Asheville Loan, Construction & Improvement Co. has received franchise to build the street railway previously mentioned.

Asheville, N. C.—Railway.—The Asheville & Craggy Mountain Railway Co., referred to in last issue, has commenced grading a 4-mile railway to the top of Sunset mountain. It has not decided yet whether to use electricity or steam for motive power.

Atlanta, Ga.—Railroads.—Bills have been introduced in the Georgia legislature to incorporate the Atlanta & Northwestern Railway Co.; North Highland Railroad Co.; Vernon Park Railway Co., of Savannah; and Suburban & West End Railway Co., of Savannah.

Batesville, Ark.—Railroad.—J. M. Bartlett and others are endeavoring to secure the building of a switch from 7½ to 9 miles long by the St. Louis, Iron Mountain & Southern Railroad Co. (office, St. Louis, Mo.)

Charleston, S. C.—Railroad.—The Carolina Construction Co. has contract to build the Charleston, Wilmington & Norfolk Railroad, recently mentioned. The line is to run from Charleston to Norfolk, 365 miles. John C. McNaughton is president of the railroad company.

Chattanooga, Tenn.—Electrical Railroad.—The North Chattanooga Street Car Co. is building a new line, to be 5 miles long and operated by electricity. The road will run through the property of the Chattanooga, Land, Coal, Iron & Railway Co.

Clifton Forge, Va.—Street Railway.—A company has been organized under a charter granted by the last Virginia legislature with W. C. Moody, president; E. M. Nettleton, vice-president, and G. K. Anderson, secretary, to build a street railway from Clifton Forge to Iron Gate.

Cumberland Gap, Tenn.—Street Railroad.—The Cumberland Gap Street Railway Co. has been chartered.

Elk Ridge, Md.—Railroad and Bridge.—The Baltimore & Ohio Railroad Co. (office, Baltimore) has commenced the construction of the cut-off lately mentioned. It will shorten the distance between Baltimore and Washington several thousand feet, and enable express trains to make the run in 40 minutes or less. An iron bridge is to be built across the Patuxent river.

Greenville, Texas.—Railroad.—The Missouri, Kansas & Texas Railroad Co. (office, Parsons, Kans.) will, it is stated, extend its line from Greenville in a northwestward direction.

Guntersville, Ala.—Railroad.—Allison, Shaffer & Co. are reported as receiving contract to build the extension of the Tennessee & Coosa Valley Railroad from near Guntersville to a connection with the main line. The contract amounts to about \$750,000, and nearly 50 miles of road will be built.

Hagerstown, Md.—Electrical Railroad.—The Hagerstown Street Railway Co. has been organized with C. W. Schold, president; S. M. Schindler, vice-president, and J. D. Main, secretary, to build the electrical railroad previously mentioned. The line is to be about 4 miles long.

Harrison, Tenn.—Railroad.—F. A. Vaughan, of Graysville, Ga., reports that the route of the Cincinnati, Georgia & Florida Railroad has been surveyed from Harrison via Tyners' Station, Graysville, Ga., to Chicamauga National Park, and westward by Rock Springs to Kensington, Ga.

Hope, Ark.—Railroad.—The Hope & Lewisville Railroad Co. has been chartered by C. E. Bramble, W. R. Kelley, J. A. Roberts and others to build a railroad from a point on the St. Louis, Arkansas & Texas Railroad at or near New Leavelle to Hope, a distance of 25 miles. The capital stock is \$250,000.

Huntsville, Ala.—Dummy Line.—The Shelta Cavern Co. is reported as to build a dummy line.

Jasper, Tenn.—Railroad.—It is reported that the extension of the Nashville, Chattanooga & St. Louis Railroad (office, Nashville) to Pikeville is being surveyed to Middleborough, Ky.

Macon, Ga.—Railroad.—J. S. McTighe & Co., contractors, will shortly sublet 180 miles of track-laying and 40 miles of station work on the Macon & Atlantic Railroad.

Monroe, La.—Railroad.—The Tensas Basin Levee Board has conveyed 24,547 acres of swamp lands to the Arkansas & Missouri Railroad Co. on condition that that company builds a levee across Boeuf cut-off, to be used as a road-bed for the railroad.

Paint Rock, Tenn.—Railroad.—The purchasers of timber land mentioned elsewhere in this issue are reported as to build a railroad from a point at or near Paint Rock. R. H. King, of Kansas City, is one of the parties interested.

Petersburg, Va.—Railroad.—The building of a railroad from Petersburg to Ridgeway, N. C., by the Seaboard Air Line, is said to be probable.

Richmond, Va.—Railroad.—The next Virginia legislature is to be applied for a charter to build a railroad from some point in Middlesex

county to the coal fields of West Virginia. Hon. J. N. Camden, of Parkersburg, W. Va., is said to be the promoter of the project.

Roanoke, Va.—Railroad.—E. S. Moorman & Co., of Lynchburg, mentioned last week, have sublet four miles of their contract on the Roanoke & Southern Railroad to Mr. Conway, of Winchester.

Roanoke, Va.—Railroad Bridges.—It is stated that new iron viaducts will replace all the high trestles on the Shenandoah Valley Railroad.

Russellville, Ala.—Railroad.—Chicago (Ill.) parties are reported as to build a branch railroad from Russellville to Newbury.

Springville, Ala.—Railroad.—The dummy railroad recently referred to is the projected Birmingham & Jones' Valley Railroad, previously mentioned. It is to be standard gauge, and work is progressing between Avondale and Birmingham. Gen. Shelley, of Birmingham, is president of the company.

Staunton, Va.—Belt Railroad.—The Staunton Development Co., reported last week, will build a belt railroad about 1½ miles long.

Waxahachie, Texas.—Railroad.—John P. Hughes, of Fort Worth, is contractor for building the Missouri, Kansas & Texas Railroad (office, Parsons, Kans.) from Waxahachie towards Hillsboro.

## Kansas City, Fort Scott & Gulf.

President Sparks, of the Macon & Birmingham Road, and President Nettleton, of the Kansas City, Fort Scott & Gulf System, and Superintendent Sullivan, of the Kansas City, Memphis & Birmingham, had a conference in Birmingham a few days ago. The meeting was held a secret, but it has transpired, according to Southern advices, that its object was the consummation of the deal between the Kansas City, Fort Scott & Gulf and Macon & Birmingham Roads, by which the former will gain a route to the sea on the tracks of the last named road. It has been understood that the Kansas City people were backing the Macon & Birmingham Road, but their object in so doing had only been surmised until the conference gave confirmation to the rumors. The Macon & Birmingham is being pushed forward as rapidly as men and money can do the work. The road is already finished as far as La Grange, near the Georgia State line, and the road is in operation about 50 miles out from Macon. It cuts through a section of country in Western Georgia rich in minerals and agriculture, where there is no competition save from branch lines of distant roads. As soon as the Western division touches Birmingham the road will be pushed in the opposite direction, from Macon to Savannah. The deal is thought to mean much for the Fort Scott System and the new road, whose traffic receipts will go bounding up with the shipments of Western grain and cattle by rail to Savannah.—N. Y. Commercial Bulletin.

## Lines of Railway in Siberia and China Under Way.

The great work on hand is the Siberia Railway, which will link St. Petersburg with Vladivostok. The *Illustrirte Zeitung* (Leipzig) gives a map of the entire surveyed route. The length will be double that of the line from New York to San Francisco. The journey will take a fortnight. General Annenkoff is the moving genius. He laid the strategic railways toward Germany and Austria and afterwards laid the Transcasian Railway. The railway through Siberia has been surveyed in forty sections and all is ready. This gives the impulse to railways in China. But much greater works are authorized. First a railway from Peking, in the North-east, to Hankow, in the center of China, on the Yang-tse-Kiang river, 600 miles from the mouth. The railway, Peking to Hankow, will be near 800 miles. A railway of almost equal length is authorized from Peking to Chinkiang all along the north. The Chinese government will itself construct the railways. It repudiates two rival schemes: First, by the Rothschilds and Krupp to advance £30,000,000; second, by Jay Gould & Co. to establish a Shanghai-American bank in connection with railway making. A railway right across the South American will shortly be finished.—Imperial Review.

## The Gauley River Railroad.

The Grottoes Co. has distributed many thousand copies of its map of Virginia and West Virginia showing the location of Shendun. Upon each of the editions of this map there has been shown a proposed line of railway from Culpeper, on the Midland Division of the Richmond & Danville system, through the Shendun Pass by way of Shendun, and across to and through West Virginia, by a great natural highway, to near the head of Gauley river, and thence down that river and the Big Kanawha to Charleston, W. Va. The following item is from the Charleston (W. Va.) Star: "General Manager Green, of the Big Four Railway, paid a visit to the Gauley river region a few days ago, accompanied by a party of capitalists who are said to be largely interested in valuable lands along that classic stream. It is believed that means the early extension of the Kanawha & Michigan Railway up the Gauley river, or the building of a branch of the Chesapeake & Ohio. There is not a richer timber or mineral region in the State than that lying along the Gauley, and yet it is entirely undeveloped."—Shendun News.

In a circular signed by Hon. F. B. Chilton, of Houston, Texas, who was appointed "general manager of the Southern Interstates Immigration Bureau" at a convention held at Montgomery, Ala., December 12, 1888, a call is made for a similar convention to assemble at Asheville, N. C., December 17, 1890. The call asks for delegations from fifteen States (including Missouri) and the Territories of New Mexico and Arizona. The delegates desired are two from every senatorial district and four at large from each State, the same to be appointed by their respective governors; two delegates from every industrial organization; one from every city or town; two from every editorial association; one from the passenger department of every railroad in the United States; one from every chartered land company in the Southern States. This is a pretty broad invitation. Should it be universally accepted, the elasticity of the entertainment capacity of that lovely city of the "Land of the Sky" would be tested to the utmost, for this call is addressed to some 8,000 delegates. Probably General Manager Chilton will be disagreeably surprised if the attendance should exceed a few hundred delegates, for a convention of that number would be much more easily handled than the mass-meeting he has invited to Asheville. Unquestionably such a compact convention would have it in its power to do good work for the South if composed of the right materials, but if the outcome of that now proposed should be no greater than from the convention of 1888, we greatly doubt the wisdom of calling it together. General Manager Chilton concludes his circular by saying: "The purpose of the Montgomery convention was to secure the united and harmonious action of all the Southern States in the matter of 'added population and capital for the South.' Much has been accomplished, and the prospects are that the move made at Montgomery will

result in the speedy development of the South's great resources. So important will be the influence of this second convention upon the prosperity and growth of the South, that it should impel every official to whom this call is directed to take such prompt and effective action as will result in a grand and influential convention." "Much has been accomplished" in the South in two years. That is an indisputable fact. We trust that in his report the general manager will be able to show what part of that "much" is due to "the move made at Montgomery," and what part of it to the operations of the "Commissioner of the Department of Associations and Organizations." The MANUFACTURERS' RECORD has frequently asked for information as to that "Department's" operations, but thus far there has been no reply. We hope the delegates "in convention assembled" will be enlightened in this respect.

THE dispatches tell us of a blizzard in the Northwest attended by heavy losses. A telegram from Abilene, Kan., says:

The Travelers' Insurance Co. has ordered its agents here to make no more loans, on account of the threats made by the People's party against interest, laws and loan companies. Every attempt will be made to collect its business up closely, and no more money will be put out until it is felt that investments will be safe. Interest rates will be raised if other companies will follow suit.

In striking contrast with these woe-filled reports are the evidences of prosperity seen on every hand in the South. While the Northwest struggles with the blizzard from October to June, and with drouth from June to October, the South enjoys a well distributed rainfall and a kind climate. The Southern farmer has no need for the money-lender, who is now threatening to withdraw his help from the farmers of the West. The South is comparatively clear of mortgages. The people are busy, prosperous and happy. With the advance of industrial development the profits of farming in the South will be still further increased by building up home markets. The South invites American immigration from the Northwest to share these unequalled advantages.

THE manager of one of the most successful new towns established in the South within the past year writes: "I fully recognize the value of the MANUFACTURERS' RECORD as an advertising medium. We have received direct benefit from it in applications for lots and for sites for industries from Kansas to Georgia and New York to Minnesota." A manufacturer writes from Wildwood, Fla.: "I can testify to the merits of your paper as an advertising medium. Last year when I was rebuilding a burned saw mill the fact got into your columns some way or other, and ever since I've been deluged with circulars."

## Money-Making in Town Enterprises.

An illustration of how money is being made by wise investors in good town enterprises in the South is found in the following extract from the Shendun (Va.) News:

"We have space in this issue for only a few instances which will give an idea as to how much the Grottoes shareholders have already received in profits.

Messrs. B. S. & T. P. Jerman, of Raleigh, N. C., bought five shares of Grottoes stock, on which they had paid \$50. They drew a double lot in block 29, which they can sell for \$2,000 or more.

Mr. N. B. McCaless, of Salisbury, N. C., drew an adjacent double lot worth equally as much.

Mr. John Buis, of Salisbury, had five shares and had paid in \$50. His lot in block 58 is worth at least \$1,000. We mean that he can sell it at this price if he cares to do so.

Mr. A. A. Thompson, of Raleigh, N. C., with five shares drew a corner lot on 7th avenue worth \$700.

Mr. T. C. Morton of Staunton, drew a double lot in block 30, which he sold the night of the drawing at \$1,200, the purchaser selling it again at \$1,400 the same night, and the purchaser afterward refused \$1,600 the next Monday.

Mr. S. F. Lord, of Salisbury, N. C., drew in block 36 a lot worth now \$500, and will be worth \$1,000 in six months.

Messrs. Eggleston & Bouldin, of Glasgow, Va., drew ten lots with fifty shares of stock. Stock, lots and all will cost them, when the stock is fully paid, as per terms of the company, \$2,500. They were not anxious to sell, but an anxious purchaser came along and offered them \$2,800 for their ten lots—\$300 more than stock, lots and all cost them, and they have their original investment still in stock, which will soon be worth a premium.

Mr. N. P. Catlett, of Charleston, S. C., drew lot 20 in block 84. If he wants 400 per cent. on his investment he won't have to look long for a purchaser.

Mrs. R. W. Colton, of Union, S. C., drew 38 in 36—a most excellent lot, madam, and worth double what your stock and lot cost you, and you will have your stock left.

Mr. R. H. Drummond, of Amherst, Va., drew 26 in 140. We don't know what Mr. Drummond can do, but the company sold lots all around it at \$500 to \$600 each.

Mr. A. Echols, of Roanoke, Va., drew 14 in 137. Adjacent lots brought \$600 at the company's sale.

Mr. Berkeley Minor, of Staunton, Va., picked up a thousand dollars in the road, so to speak, by drawing lot 12 in block 83.

And Miss Jessie D. Hicks, of Washington, D. C., did almost as well by drawing 16 in 33.

D. L. Eavers, of Milnesville, Va., drew 50 feet front in block 30, worth \$1,500 to \$1,800. Thus we might enumerate *ad infinitum*, but we only wanted to give a few instances. There are hundreds of others just as lucky, and no holder of Shendun stock was unlucky. All the lots are valuable, and as the weeks and months go by and furnaces, rolling mills, foundries, machine shops and manufacturing establishments go up, those lots are going up with them.

The allotment itself was a big dividend for the stockholders, tremendously big, and every shareholder ought to be an everlasting friend to the wise management of this great enterprise in which he has invested so profitably.

There is big money still to be made in Shendun—thousand-dollar lots here now will be cheap one year from now at \$3,000.

This is a conservative statement. Stick a pin in it, and mark the prediction."

Subscribe to the MANUFACTURERS' RECORD.  
Price \$4.00 a year, or six months for \$2.00.

## Southern Financial News.

### NEW BANKS.

Anniston, Ala.—It is proposed to organize a branch of the Co-operative Bank of North America (office, Birmingham).

Asheville, N. C.—The bank previously reported as to be established by Frank Cox with a capital stock of \$100,000 will be known as the Battery Park Bank.

Atlanta, Ga.—Bills have been introduced in the State legislature to incorporate the Mechanics' & Planters' Bank of Georgia and the American Trust & Banking Co.

Buena Vista, Va.—The Buena Vista Loan & Trust Co. has been organized with C. B. Guyer, president, and B. C. Moomaw, secretary. The capital stock is \$200,000.

Chattanooga, Tenn.—The Merchants' National Bank has commenced business with C. D. Beebe, president, and R. W. Barr, cashier. The capital stock is \$350,000.

Clarksville, Tenn.—A safety deposit and trust company will probably be established with a capital stock of \$50,000.

Cockeysville, Md.—It is proposed to organize a national bank with J. F. Cockey, Jr., president, and W. H. Buck, Jr., cashier; the capital stock to be \$50,000.

Durham, N. C.—The First National Bank contemplates increasing its capital stock from \$100,000 to \$2,000,000.

Eastland, Texas.—The Eastland National Bank has been organized with W. G. Purvin, president. The capital stock is \$50,000.

Gainesville, Ga.—The Mutual Savings & Loan Association has been organized with W. S. Williams, president; E. P. Chambers, secretary, and C. C. Sanders, treasurer.

Goshen, Va.—The Palace City Building, Investment & Banking Co. has been organized with H. St. George Tucker, of Staunton, president, and J. G. Jones, secretary. The capital stock is \$300,000.

Quitman, Ga.—The Bank of Quitman has increased its capital stock from \$55,000 to \$100,000.

Roanoke, Va.—The Roanoke Banking & Investment Co. has been organized with W. K. Andrews, president; J. A. Fishburne, vice-president and J. W. Woods, secretary. The capital stock is \$10,000.

Round Rock, Texas.—P. M. Cuny, of Austin, and others have applied for authority to organize the First National Bank.

Savannah, Ga.—A bill has been introduced into the State legislature at Atlanta to incorporate the Savannah Savings Bank & Mortgage Co.

Scotland Neck, N. C.—A new bank is reported as to be started.

Sequin, Texas.—The establishment of a national bank is talked of.

Shendun, Va.—The organization of a State bank is proposed.

Talbotton, Ga.—A bill has been introduced in the State legislature to incorporate the People's Bank.

Baltimore, Md.—The Western Permanent Loan & Building Association has declared a semi-annual dividend of 3½ per cent.; Merchants' & Mechanics' Permanent Building & Loan Co., a semi-annual dividend of 3 per cent., and the Consolidated Gas Co., a dividend of 1¼ per cent.

Baltimore, Md.—The stockholders of the West Boundary Real Estate Co. will meet November 21 to consider the issuance of \$100,000 6 per cent. first mortgage bonds.

Buena Vista, Va.—The Opie Investment Co. has been organized with Dr. Thomas Opie, of Baltimore, president; J. P. Shaner, of Lynchburg, treasurer, and R. H. Drummond, secretary. The capital stock is \$500,000.

Charleston, S. C.—It is stated that the Charleston, Wilmington & Norfolk Railroad Co. will issue \$6,000,000 of first-mortgage bonds for the construction of its road.

Maysville, Ky.—The First National Bank of Maysville has declared a semi-annual dividend of 4 per cent.

Montgomery, Ala.—The city will apply to the next legislature for authority to issue \$495,000 of bonds, to be payable in 30 years and to bear a rate of interest not exceeding 6 per cent. The proceeds are intended for municipal improvements, including \$400,000 for purchasing and enlarging the water works and \$20,000 for refunding market-house bonds.

Owensboro, Ky.—The Davis County Fair Co. has declared a dividend of 20 per cent.

Oxford, Ala.—The stockholders of the Oxford Lake Line will meet December 8 to consider the issuance of \$75,000 of bonds.

Richmond, Va.—The Southern Investment Co. has been chartered with H. L. Pelouze, president, and W. F. Richardson, secretary. The authorized capital stock is \$1,000,000.

Sequin, Texas.—The city council has decided to issue \$14,000 of bonds for schoolhouse purposes.

Talbotton, Ga.—A bill has been introduced in the State legislature to incorporate the Talbotton Loan & Investment Co.

The directors of the Augusta & West Florida Railroad Co. have, it is stated, ratified a mortgage of \$6,495,000 to the New York Mercantile Trust Co.

THE various land companies of Salem, Va., are acting in concert in their efforts to locate plants. They have put aside a fund of \$500,000 to be used in subscriptions to the stock of new enterprises at Salem. Mr. George Allen has just returned from a trip through the Northwest in the interest of this movement. His work among the manufacturers in that region may lead to the transfer of several large plants to Salem.

### Want to Locate South.

The owners of a plant consisting of a complete outfit of improved machinery and tools, with all necessary patterns for the manufacture of a special line of patented woodworking machinery, will sell a controlling interest and move South. Everything is in first-class condition, and will bear the closest scrutiny. This opportunity to establish a profitable manufacturing business at some advantageous Southern point should interest the promoters of live towns in this section. Those desiring to investigate will receive prompt attention by addressing "C. R. M.," care MANUFACTURERS' RECORD.

## JOHN L. WILLIAMS & SON, BANKERS, RICHMOND, VA.

Our Manual of Investments for 1890, the largest work of the kind published by any banking house in America, (406 pages, octavo, cloth,) may be had without charge by clients, correspondents and those expecting to do business with us; by others at \$2 per copy.

### Richmond Stock Exchange Quotations.

Reported by JOHN L. WILLIAMS & SON, Bankers, Richmond.

RICHMOND, VA., November 11, 1890.

	BID.	ASKED.
North Carolina 4's, 1910.....	95	100
North Carolina 6's, 1919.....	122	125
Virginia New 3's, 1932.....	66½	66½
Danville 5's.....	100	103
Lynchburg, Va., 5's, 1915.....	103	106
Petersburg, Va., 5's, 1918.....	104	106
Norfolk, Va., 5's, 1911.....	105	108
Richmond, Va., 5's, 1922.....	108	112
Atlanta & Charlotte Ry., 1st 7's, 1907.....	121½	123
Atlanta & Charlotte G'd 6's, 1900.....	103	105
Char., Col. & Aug. R.R. Gen. 6's, 1932.....	110½	111½
Georgia Pacific Ry. 1st 6's, 1922.....	110½	111½
Georgia Pacific 2d 5's, 1923.....	75	75
Ga. Pacific Income, 5's.....	19	23
Petersburg Railroad Class A 5's, 1926.....	105	106
Petersburg Railroad Class B 6's, 1926.....	107½	107½
Rich. & Danville R. R. Gold 6's, 1915.....	116	101
West. N. Car. R. G'd 6's, 1914.....	102	102
Northwestern N. Car. R. R. 1st 6's.....	99	98½
Atlanta & Charlotte R. R. Stock.....	97	98½
North Carolina Railroad Stock.....	103	115
R. F. & Pot. R.R. Div'd Obligations.....	113	115
Virginia Midland Railway Stock.....	52½	53
Commonwealth Land Co.....	25	25
Sloss Iron & Steel Co. 1st 6's.....	91	92
Sloss Iron & Steel Co. 2d 6's.....	60	65

BASIC CITY.	Number of lots given with each 10 sh's stock organized.	When	Capital stock.	Par value.	Bid.	Asked
Basic City M'g. & Land Co....	Dec. 7, '89	\$700,000	50%	100	95	97½
BRISTOL.						
Southwest Bristol Land Co*.....	Aug. '90	300,000	\$150,000	100	..	..
Pioneer Land Co.....	June, '90	500,000	..	100	..	..
Ricmond & Bristol Land Co.....	June, '90	220,000	..	20	..	..
Commonwealth Land Co.....	June, '90	104,000	60,000	20	..	..
BUCHANAN.						
Central Land Co*.....	Apr'l 12, '90	1,500,000	750,000	100	73	80
BUENA VISTA.						
Buena Vista Co.....	Feb 14, '89	800,000	50%	100	73	80
Buena Vista Improvement Co.....	Jan., 1889	50,000	full paid	100	124	140
CLIFTON FORGE.						
C & O Development Co*.....	April, '90	300,000	..	100	..	75
Clifton Forge Mfg. & D. vel Co**.....	Aug. 18, '90	200,000	..	100	..	118
Clifton Forge Co.....	May, 1890	400,000	..	100	..	..
CHARLOTTESVILLE.						
Charlottesville Ind. & Land Imp. Co*.....	April, '89	50,000	..	50	50	51
Belmont Land Co.....	July 15, '89	100,000	..	100	105	121
Charlottesville Development Co.....	April 1, '90	40,000	..	50	..	..
West End Land Co.....	April 16, '89	40,000	..	50	..	51
Jefferson Park Improvement Co.....	Aug. 15, '89	150,000	..	50	..	..
GLASGOW.						
Rockbridge Co.....	Sept., '89	5,000,000	475,000	100	..	111½
West End Glasgow Land Co.....	March, '90	103,000	..	..	..	113
HARRISONBURG.						
Harrisonburg Land & Imp. Co.....	May 22, '90	150,000	..	100	..	139
LYNCHBURG.						
West Lynchburg Land Co*.....	..	1,000,000	45%	100	..	..
Rivermont Co.....	..	1,500,000	40%	10	..	3
South Lynchburg Land Co.....	..	..	60%	100	..	..
Park Avenue Land Co.....	..	100,000	50%	100	..	..
PETERSBURG.						
West End Land & Improvement Co.....	June 15, '90	25,000	50%	63	..	100
Virginia Immigration L'd & Imp. Co.....	July 10, '90	50,000	100	..	..	111
PULASKI.						
Pulaski Development Co.....	March, '90	500,000	200,000	..	40	..

\* Stock declared full paid.

\*\* 5 per cent dividend declared October, 1889.

† 10 per cent dividend declared, payable January 1, 1891.

\*\* \$14,000 held in treasury.

‡ When 50 per cent. has been paid in the stock will be declared full paid. The company receives the stock at \$75 in payment 2d and 4th payments for lots purchased of them.

†† Stock taken at \$150 in part payment for lots.

## The Southern Investment Co.

J. J. BURNS, Manager.

167 DEARBORN STREET, CHICAGO, ILL.

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## Southern Real Estate,

CITY AND TOWN PROPERTY.

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Mines, Mills, Furnaces  
and Factories.

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Correspondence Solicited.

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OF BALTIMORE.

Capital - - - - - \$300,000.  
Surplus and Undivided Profits - 50,000.

Specially solicit the accounts of banks and bankers. Allows them a liberal rate of interest on daily balances. Credits them at par with items on the Eastern States, Maryland and adjoining States and the prominent cities of the Western States. Correspondence invited.

## EQUITABLE MORTGAGE COMPANY.

Capital Subscribed..... \$2,000,000.00  
Paid in (cash)..... 1,000,000.00  
Surplus, undivided profits..... 375,716.85  
Assets..... 11,68,985.14

The well-known firm of accountants, Barrow, Wade, Guthrie & Co., of London, Manchester and New York, upon auditing the accounts of the Company as published June 30th, 1890, appended thereto the following certificate:

Having examined the books of the Equitable Mortgage Company, we hereby certify that the foregoing accounts and statement are in conformity therewith, and we believe that the accounts fully and fairly represent the position of the Company as on the 30th June, 1890.

BARROW, WADE, GUTHRIE & CO.

New York, 16th October, 1890.

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## PROPOSALS.

UNITED STATES ENGINEER OFFICE. WILMINGTON, N. C., Nov. 14, 1890.

SEALED PROPOSALS for sheet piling, stone, mattresses, &c., in place in dike in Winways Bay, S. C., are to be received at this office until 12 M. December 15th, 1890. The attention of bidders is specially invited to Acts of Congress, approved 26th February, 1885, and 23d February, 1887, volume 23, page 332, and volume 24, page 414, Statutes at Large. All information furnished by W. H. BIXBY, Captain of Engineers.

UNITED STATES ENGINEER OFFICE. WILMINGTON, N. C., Nov. 6th, 1890.

SEALED PROPOSALS for dredging in the Cape Fear River at and below Wilmington, N. C., and Lockwood's Folly River, N. C., will be received at this office until 11 A. M., December 15th, 1890. The attention of bidders is specially invited to Acts of Congress, approved 26th February, 1885, and 23d February, 1887, volume 23, page 332, and volume 24, page 414, Statutes at Large. All information furnished by W. H. BIXBY, Captain of Engineers.

SEALED PROPOSALS will be received at the Office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M. on the 2d day of December, 1890, for all the labor and materials required to put in place complete the iron vault and closet doors for the U. S. Courthouse and Postoffice building at Pittsburgh, Pa., in accordance with the drawings and specification, copies of which may be had at this office or the office of the superintendent at Pittsburgh, Pa. Each bid must be accompanied by a certified check for \$100. The Department will reject all bids received after the time herein stated for opening the same, also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in an envelope, sealed and marked "Proposal for Vault Doors at Pittsburgh, Pa.," and addressed to JAS. H. WINDRIM, Supervising Architect. November 10th, 1890.

SEALED PROPOSALS will be received at the Office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M. on the 25th day of November, 1890, for all the labor and materials and fixing in place complete the low-pressure, steam-heating and ventilating apparatus for the U. S. Postoffice, &c., building at Houston, Tex., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the superintendent at Houston, Tex. Each bid must be accompanied by a certified check for \$100. The Department will reject all bids received after the time herein stated for opening the same, also all bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in an envelope, sealed and marked "Proposal for the Low-Pressure, Steam-Heating and Ventilating Apparatus for the U. S. Postoffice, &c., building at Houston, Tex., and addressed to JAS. H. WINDRIM, Supervising Architect. November 11th, 1890.

SEALED PROPOSALS will be received at the Office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M. on the 25th day of November, 1890, for all the labor and material and fixing in place complete the low-pressure, return-circulation, steam-heating and ventilating apparatus for the U. S. Courthouse, Postoffice, &c., building at Huntsville, Ala., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the custodian at Huntsville, Ala. Each bid must be accompanied by a certified check for \$100. The Department will reject all bids received after the time herein stated for opening the same, also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in envelopes, sealed and marked "Proposal for the Low-Pressure, Return-Circulation, Steam-Heating and Ventilating Apparatus for the U. S. Courthouse, Postoffice, &c., building at Huntsville, Ala., and addressed to JAS. H. WINDRIM, Supervising Architect. November 11th, 1890.

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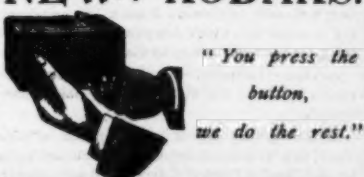
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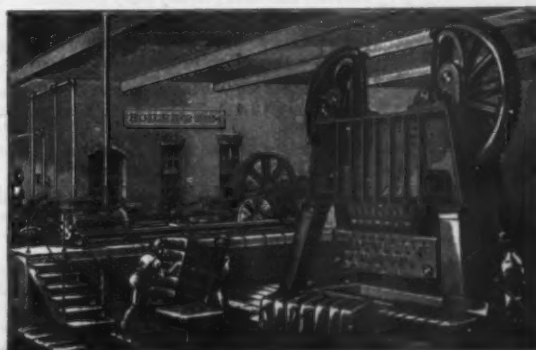
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CINCINNATI, O.

# CONSTRUCTION DEPARTMENT.

**WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.**

THE excitement in Wall Street, if long continued, would necessarily have an injurious influence upon all lines of business in all sections of the country, but as trade and manufacturing interests everywhere are prosperous, it is not probable that the stock jobbing operations of New York will have more than a temporary effect upon general business. Under any circumstances, though, the South is in a better position to stand even a panic than any other section. It has gathered big crops that will aggregate in value for the year nearly \$1,000,000,000, its cotton alone, including the seed, counting up this year between \$450,000,000 and \$500,000,000, every dollar of which it will draw from the North and Europe. Its farmers are practically out of debt, and many of them have a good surplus; its manufacturing interests are prosperous, and its railroads are crowded with freight traffic. The whole South is advancing rapidly, and if dependent upon its own financial resources could stand the strain far better than the West. But the enormous shrinkage in stock values in Wall Street will tend to drive money from that center of wild speculation to safer investments in Southern development and manufacturing interests. The decline in 23 stocks on the New York Exchange since November 1 represents a wiping out of \$100,000,000, and the people who have seen fortunes swept away like this will prefer to put their money elsewhere in the future. The daily accumulation of wealth in the United States is enormous, and it must find a field of investment somewhere. Driven from Wall Street speculations, and no longer finding any profitable openings in the West as in former years, it must inevitably turn to the South. Thus, instead of Wall Street's flurry injuring the South, it will help to drive a still larger volume of money this way. The past week shows continued activity in the organization of industrial enterprises and of town-building companies. Salem, Va., leads off with an appropriation by the several land companies there of \$500,000 in cash to secure the establishment there of a rolling mill, cotton mill, car works and other enterprises; in Buena Vista a \$1,000,000 company has been organized to build basic steel works, and three improvement and building companies with an aggregate capital of \$300,000 have been started in the same place; Glasgow has organized a \$100,000 car works company; Norfolk, three land improvement companies with a capital of \$700,000; Wheeling, W. Va., is to have new steel works; at Vicksburg, Miss., a \$600,000 phosphate company has been chartered, and at Aberdeen, in the same State, a \$50,000 machine shop company; at Algiers, La., a \$75,000 brewery will be built; Bessemer, Ala., has organized a \$100,000 pipe manufacturing company; Baltimore, a \$200,000 car company; Bartow, Fla., a \$50,000 manufacturing company; Blacksburg, S. C., a \$40,000 stove foundry; Rusk, Texas, a \$500,000 company

to build an iron furnace, and Rogers, Ark., a \$40,000 ice factory. These enterprises, scattered all over the South, show how widespread is the activity that is seen from Maryland to Texas. Without any fictitious speculation or wild booming the South is steadily pressing forward, building new towns, new railroads, new factories and furnaces, and everywhere shows evidence of activity and prosperity.

\*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

## ALABAMA.

Ashville—Grist Mill and Gin.—G. W. Hodges has put new machinery in his cotton gin and grist mill, as recently reported.

Ashville—Electric-light Plant.—The company recently reported as organized to erect an electric-light plant has a capital stock of \$10,000, and has contracted with a Chicago (Ill.) company for its erection.

Ashville—Water Works.—The Ashville Land & Improvement Co. has received franchise to construct the water works previously mentioned.

Behrman—Lumber Mill.—The Scotch Lumber Co. has, it is reported, put in new machinery and erected dry-kilns.

Bessemer—Plumbers' Supply Factory.—F. H. West is president; A. I. Dexter, vice-president, and D. McK. Sinclair, secretary, of the Alabama Pipe Co., lately reported.

Birmingham—Gas Works.—E. W. Rucker, A. G. Bond, T. W. Seddon and others have, it is stated, organized a stock company for the purpose of utilizing the fumes from the coke ovens about the city for making illuminating gas.

Birmingham—Iron Works.—The Alabama Iron Works is reported as having put additional machinery in its plant.

Birmingham—Coal Mines, etc.—The Alabama State Mining & Manufacturing Co. will petition the legislature for the privilege of developing coal and other mineral lands, etc. The capital stock is to be \$10,000. Frank Y. Anderson can give particulars.

Horse Creek—Coal Mines.—The Dora coal mines, lately mentioned, have been purchased by parties who have organized a stock company to improve and operate them. J. T. Morgan, of Birmingham, is president; William Tuttle, of Morganville, Ga., vice-president, and R. E. Morgan, of Chattanooga, Tenn., secretary, of the new company.

Mobile—Implement Factory.—W. C. Maynard and J. O. Manton, of Northampton, Mass., are investigating with a view of establishing an agricultural implement factory in Mobile.

Montgomery—Water Works, etc.—The city will petition the legislature for authority to issue \$50,000 of bonds for street paving, and \$400,000 for the purpose of purchasing, enlarging and improving the water works recently mentioned.

Piedmont—Planing Mill.—W. J. Jones has purchased a half interest in the Piedmont Planing Mills, and they will, it is reported, be improved.

Piedmont—Shoe Factory.—Harbin & Osbourne have received contract for the erection of the shoe factory of the Piedmont Shoe Manufacturing Co., lately reported. The factory will be 120x35 feet.

Piedmont—Canning Factory.—P. K. Green, of Hazlettville, Del., and Havre de Grace, (Md) parties will, it is stated, organize a stock company to erect the canning factory lately mentioned.

Sheffield—Woodworking Factory.—The Enterprise Woodworking Co. is reported as putting additional machinery in its woodworking factory.

Sheffield—Iron Works.—Gilbert & O'Neil have incorporated the Sheffield Iron Works to operate their plant.

Sheffield—Gas Wells.—E. H. Lawrence and others will, it is stated, sink gas wells.

Woodlawn—Sausage Factory.—Scott & Wood are reported as having established a sausage factory.

## ARKANSAS.

Little Rock—Barrel and Stave Factory.—The Southern Stave & Lumber Co., lately reported as to erect a barrel and stave factory, has H. J. Walsh for president; R. C. Outcalt, vice-president, and G. J. Low, secretary. The capital stock is \$100,000.

Little Rock—Water Works.—The St. Louis & Iron Mountain Railway Co. (office, St. Louis, Mo.) will, it is stated, construct a system of water works in Little Rock.

Little Rock—Foundry and Machine Shops.—D. R. Wing & Co. will, it is stated, add to their foundry and machine shops a blacksmith shop 50x100 feet.

Texarkana—Lumber Mill.—The Red River Lumber Co. has been incorporated with C. E. Bramble, president; J. A. Roberts, vice-president, and R. L. Trigg, secretary, to erect and operate a lumber mill. The capital stock is \$100,000.

Van Buren.—M. T. West is president and D. S. Hollins, secretary, of the Farmers' Co-operative Co., reported in last issue.

## FLORIDA.

Apalachicola—Furniture Factory.—James McGlynn will rebuild his furniture factory, reported last week as burned.\*

Bartow—Phosphate Works.—English capitalists will erect phosphate works near Falling Creek, as lately reported.

Bartow—Real Estate, &c.—T. M. Lybass, J. W. Durrance, J. E. Wilson and others have incorporated the Farmers' Improvement Co. for the purpose of dealing in real estate, &c. The capital stock is \$50,000.

Bayard—Shingle Mill.—Fairhead, Strawn & Co. are reported as having moved their shingle mill from Clarksville to Bayard.

Fernandina—Fibre Factory.—The Loomis Manufacturing Co. is putting new machinery in its fibre factory, as reported in last issue.

Key West—Dyke.—Wm. Black will receive proposals until November 25 for furnishing rock and constructing a dyke at the northwest channel entrance to the harbor of Key West.

Myers—Phosphate Works.—The Lee County Phosphate Co. will erect phosphate works in Lee county.

Palatka—Sugar Refinery.—John T. Minton and George W. Hanlon are reported as to erect a sugar refinery.

Pasadena—Phosphate Mines.—Mr. Steven is reported as developing phosphate mines near Pasadena.

Tampa—Lumber Mills.—The Tampa Lumber Co. will rebuild its lumber mill, recently reported as burned, and put in additional machinery.\*

Wildwood—Gin and Grist Mill.—J. E. Barwick has erected a grist mill and cotton gin, as reported in last issue.\*

## GEORGIA.

Albany—Planing Mill.—Cryger & Pace, lately mentioned, have erected a planing mill.

Atlanta—Wagon Works.—The Florence Wagon Co., of Florence, Ala., is investigating with a view of establishing a branch of its wagon works in Atlanta and organizing a stock company to operate same.

Atlanta—Land.—M. L. Tolbert, C. R. Harris, J. F. Gatins and others have incorporated the North Atlanta Land Co. for the purpose of dealing in land, etc. The capital stock is \$10,000.

Carrollton—Saddle and Harness Factory.—J. A. Mitchell will, it is stated, erect a new building for his saddle and harness factory and increase capacity.

Cordele—Foundry and Machine Shop.—Tomlin & Harris have increased the capacity of their planing mill, as recently stated, erected a foundry and machine shop and organized the Cordele Machine Shop to operate same.

Dahlonega—Gold Mines.—W. W. Murray has purchased the Miller Ripperly gold mine, as reported in last issue; also the Jumbo gold mine near Dahlonega, and will develop them.

Elberton—Electric-light Plant.—The Elberton Electric Light Co. will petition the legislature for a charter, and probably erect an electric-light plant. Swift, Wilcox & Braswell can be addressed.\*

Fort Valley—Land, &c.—The Ohio Fruit Land Co., lately reported as organized, has been incorporated with a capital stock of \$25,000.

Gainesville—Buggy and Wagon Factory.—Bagwell & Gower, of Flowery Branch, are endeavoring to organize a stock company to remove their buggy and wagon factory to Gainesville.

Jackson—Laundry.—S. C. McCandless and others will erect the steam laundry lately mentioned.

Macon—Land, &c.—B. W. Hitchcock, of New York, has, as previously stated, purchased 27,000 acres of land in Central Georgia and will colonize it for agricultural purposes.

Macon—Carriage and Wagon Factory.—W. H. Schatzman is reported as erecting a new carriage and wagon factory.

Macon—Saw Mill.—Harris & Mitchell are, it is reported, building a new saw mill near Macon.

Rome—Publishing, &c.—W. B. Pattillo, E. F. Smith, E. E. Bawell and others have incorporated the Pattillo Printing Co. to publish a newspaper, etc. The capital stock is \$6,000.

Savannah—Paving.—Martin Cooley has received contract for paving at \$34.35, as reported last week.

West Point—Stock-feeder Factory.—It is stated that a company will probably be organized to erect a factory for the manufacture of the Carpenter automatic stock feeder.

## KENTUCKY.

Carrollton—Pants Factory.—The Carrollton Woolen Mills will establish a pants factory in connection with its woolen mill, as recently reported.

Cloverport—Coal Mines.—An English syndicate represented by Mr. Heron, is reported as having purchased the canal coal mines of the Breckenridge Co. near Cloverport, and will make improvements and develop same; also develop other mineral lands near Cloverport.

Hawesville—Spoke Factory.—Owen & Cooley have established, it is reported, a spoke factory.

Henderson—Distillery.—The Winstead Distilling Co. has been organized with A. S. Winstead, president; E. W. Winstead, vice-president, and C. S. Winstead, secretary. The capital stock is \$26,000.

Henderson—Electric-light Plant.—The Henderson Electric Light & Power Co. is being organized to have a capital stock of \$50,000.

Louisville—Veneer Mill.—The Louisville Veneer Mill Co. has enlarged its veneer mill, as reported in last issue.

Louisville—Shirt Factory.—Charles Bakrow, A. V. Thompson, J. E. Hays and others have incorporated the Falls City Shirt Manufacturing Co. for the purpose of manufacturing shirts. The capital stock is \$30,000.

Louisville—Saddlery.—The Langdon-Krieger Saddlery Co. has amended its charter, increasing capital stock to \$200,000 and changing its name to the Langdon-Conrad Saddlery Co.

Louisville—Land Improvement.—The Commercial Lot Co. has been incorporated with R. H. Young, president; J. M. Fetter, vice-president, and L. P. Campbell, secretary, to purchase and improve land in Jefferson county. The capital stock is to be \$329,750.

Louisville—Clothing Factory.—Harris, Rogers & Lapp will establish a clothing factory.

Middlesborough—Publishing.—T. E. Powell and G. W. Albrecht have incorporated the Powell Printing Co. for the purpose of publishing, printing, &c. The capital stock is \$25,000.

Middlesborough—Basic Steel Plant.—J. P. Withrow & Co., of Pittsburgh, Pa., are at work on the steel plant previously reported as to be built by the Watts Iron & Steel Syndicate, Limited, of London, Eng. The plant will consist of a complete open-hearth basic steel works, including seven 25-ton furnaces, with all gas producers, blooming mill, shears, &c.; capacity 350 tons of slabs and billets per day.

Newport—Smelting Works.—The Hartsfield Furnace & Refining Co. has been incorporated with Herman Nagel, president; George Hildebrand, vice-president, and William Lampe, secretary, to smelt and refine precious metals. The capital stock is \$10,000.

Owensboro—Wheel Factory.—The Owensboro Wheel Co. has increased its capital stock from \$20,000 to \$100,000.

Pineville—Saw Mill.—B. F. Culver & Co. will, it is reported, remodel and enlarge their sawmill.

Winchester—Planing Mill.—Hagan Bros. are reported as having purchased the planing mill of M. H. Clay & Co. for \$6,000.

## LOUISIANA.

Algiers—Brewery.—Architect Einsiedel is preparing plans for the brewery of the Algiers Brewing Co., previously reported. The cost of the brewery will be about \$75,000.

Crowley—Saw Mill, &c.—T. C. Crowell has, it is reported, purchased a large tract of timber land near Crowley on which he will erect a saw mill.

Gibson—Lumber Mill.—The Fendel Mills Co. is reported as putting new machinery in its lumber mill.

West Monroe—Saw Mill.—F. Vollman has put additional machinery in his saw mill, it is stated.

## MARYLAND.

Baltimore—Car Works.—J. M. Blondell, T. E. Hambleton, W. A. House, Jr., and others have incorporated the Blondell Manufacturing Co. to erect shops for the manufacture of horse, electric and cable street cars. The capital stock is \$300,000.

Baltimore—Machine Shops.—Machine shops will, it is stated, be established in the Maryland Agricultural College.



**Baltimore—Paint Factory.**—C. C. Garrett, R. M. Glacken, John Brown and others have incorporated the Canton Color Co. to manufacture paints, &c. The capital stock is \$10,000.

**Baltimore—Water-tower.**—The city fire commissioners have let contract to the Kansas City Fire Supply Co., of Kansas City, Mo., for the furnishing of a Hale water-tower, 55 feet high, for \$4,500.

**Frostburg—Electric-light Plant.**—The Frostburg Gas Light Co. will, it is stated, erect a new building for its electric-light plant.

**Hagerstown—Silk Mill.**—A three-story silk mill, 48x204 feet, is being erected. The Hagerstown Manufacturing, Mining & Land Improvement Co. can give information.\*

**Port Deposit—Electric-light Plant.**—The Port Deposit Electric Light Co. will probably rebuild its electric-light plant, reported in this issue as burned.

**Union Bridge—Lead Mines.**—Lead deposits are being developed near Union Bridge.

**Washington, D. C.—Electric-light Plant.**—A syndicate is reported as having purchased site for the erection of an electric-light plant. Francis Hufty can give information.

**Washington, D. C.—Land Improvement.**—The Rock Creek Co., reported in last issue (under Norfolk), has purchased a large tract of land near Washington which it will develop and improve.

#### MISSISSIPPI.

**Aberdeen—Spoke Factory.**—The Gibson & Moore Manufacturing Co. will, it is stated, add a wagon factory to its spoke factory.

**Aberdeen—Iron Works.**—The \$50,000 stock company lately mentioned as probably to be organized by E. M. Ivine, of Grand Haven, Mich., and others for the purpose of moving his iron works to Aberdeen, has been incorporated as the Tombigbee Iron Works. The capital stock is to be \$25,000.

**Bay St. Louis—Electric-light Plant and Ice Factory.**—The Gulf Coast Ice & Manufacturing Co., lately reported as organized to erect an ice factory, has, it is stated, let contract to Stratton & Co., of Columbus, Ga., for a 10 ton ice machine, and to the Bell Electric Light Co. for the erection of an electric-light plant.

**Ellisville Depot.—Lumber Mill.**—The Ellisville Lumber Co. is, it is reported, enlarging its lumber mill and putting in new machinery.

**Vicksburg—Lumber Mill.**—A lumber manufacturing company with a capital stock of \$57,000 is reported as having been organized.

**Vicksburg—Fertilizer Factory, &c.**—J. L. Carney, Joseph Hirsch, J. J. Cowan and others have incorporated the Carney Phosphate Co. to develop phosphate lands, manufacture fertilizers, &c. The capital stock is \$600,000.

#### NORTH CAROLINA.

**Alma—Lumber Mill.**—Wilkinson & Fore and Mr. Fitzhugh, of Red Springs, have organized the Alma Lumber Co. and will, it is stated, increase the capacity of their lumber mill.

**Cherokee County—Land.**—Manning & Co., of New Orleans, La., are reported as having optioned the marble and iron property of J. M. Thrash, in Cherokee county, for \$25,000.

**Golden—Gold Mines, &c.**—The Golden Valley Hydraulic Mining Co., lately mentioned, has recently increased its capital stock from \$100,000 to \$300,000, and will erect two saw mills.\*

**Hillsboro—Granite Quarry.**—H. P. Jones and R. E. Lyon, of Durham, have optioned granite quarries near Hillsboro and will probably develop same.

**Lexington—Plug tobacco Factory.**—A plug-tobacco factory is reported as being erected.

**Madison County—Mineral and Timber Land.**—R. H. King, of Kansas City, Mo., and Lynn (Mass.) parties have, it is stated, purchased 175,000 acres of mineral and timber land in Madison and Vance counties, and will organize a \$1,000,000 stock company to develop same, build a manufacturing town, &c.

**New Berne—Artesian Wells.**—Samuel Cook & Son are sinking artesian wells.\*

**Oxford—Tobacco Barn.**—The Modern Tobacco Barn Co., of High Point, previously reported as to move its factory to Oxford, has been incorporated by D. A. Waters, W. H. Snow, D. G. Devinah, of Philadelphia, Pa., and others, with a capital stock of \$250,000.

**Raleigh—Land.**—The Raleigh Land & Improvement Co. has been incorporated with A. A. Thompson, president; C. B. Edwards, vice-president, and W. N. Jones, secretary. This company has, it is stated, purchased several tracts of land, including the Seawell property, which it contemplates improving.

**Raleigh—Saw Mill.**—Ellington, Royster & Co. will, it is reported, erect a saw mill.

**Rocky Mount—Tobacco Factories.**—Contract has been let, it is reported, for the erection of several tobacco factories.

**Sanford—Sash, Door and Blind Factory.**—The Sanford Sash & Blind Co. has enlarged its sash, door and blind factory and put in new machinery.\*

**Wilmington—Dredging.**—W. H. Bixby will receive proposals until December 15th for dredging in the Cape Fear river at and below Wilmington and Lockwood's Folly river.

**Wilmington—Knitting Mill.**—A knitting mill will probably be established.

**Wilmington—Mattresses, Sheet Piling, &c.**—W. H. Bixby will receive proposals until December 15th for sheet piling, stone, mattresses, &c., in place in dike in Winyaw Bay, S. C.

**Winston—Land.**—The parties recently reported as having purchased 400 acres of land near Winston have organized the Winston Development Co. to improve it. The capital stock is \$100,000.

**Winston—Tobacco Factory.**—T. J. and N. S. Wilson are reported as enlarging their tobacco factory.

**Winston—Mineral and Timber Lands, &c.**—The Piedmont Land & Manufacturing Co., reported in last issue, has for its purpose the buying and developing of mineral and timber lands and town-site properties. E. H. Stewart, of Roanoke, Va., is president, and the company has a maximum capital stock of \$500,000.

#### SOUTH CAROLINA.

**Anderson—New Town.**—The Western Carolina Land & Improvement Co., lately reported as organized to build a new town to be called Calhoun Falls, has been incorporated with P. K. McCully, president; W. W. Humphreys, vice president, and J. D. Maxwell, secretary.

**Blackburg—Stove Factory.**—The stock company lately mentioned as to be organized to erect a factory for the manufacture of the Joseph Black patent cooking stove has been incorporated as the Blackburg Stove & Hardware Co. with a capital stock of \$10,000.

**Charleston—Dredging.**—F. V. Abbot will receive bids until November 21 for dredging in Wappo Cut, S. C., Brick-yard creek, S. C., and between Estherville and Minim creek, S. C.

**Charleston—Publishing.**—The Southern Stamp & Publishing Co. has been organized.

**Dacusville—Factory.**—A stock company is reported as having purchased site for a factory near Dacusville.

**Rock Hill—Buggy Factory.**—The Holler & Anderson Buggy Co. has been incorporated with a capital stock of \$25,000.

#### TENNESSEE.

**Blount County—Manganese Mines.**—C. C. Davis, of Chattanooga, is reported as developing manganese mines in Blount county.

**Bristol—Bottling Works.**—J. W. Waynick will erect, it is reported, new bottling works.

**Charlotte—Land.**—The Vanleet Land Improvement Co. has been incorporated.

**Chattanooga—Land.**—C. E. Stanley, F. De Tavernier, H. B. Case and others have incorporated the North Jersey Land & Improvement Co. Clarksburg—Steel Plant—A steel plant will probably be constructed.

**Clarksburg—Wagon Factory.**—It is probable that a wagon factory will be erected.

**Dayton—Planing Mill.**—Matthews & Evans will, it is stated, move their planing mill to South Dayton and put in new machinery.

**Dayton—Brick Works.**—W. S. Robeson & Co. are reported as having put new machinery in their brick works at South Dayton.

**Dayton—Land, &c.**—The Tennessee Industrial Land Co., lately mentioned, has organized as "The Corporation of Dayton" with J. R. Wicker sham as president; Simon Florsheim, vice president, and W. A. Paulsen, secretary, all of Chicago, Ill.

**East Chattanooga—Water Works.**—The East Chattanooga Land Co. is reported as having let contract for the construction of a system of water works.

**Harriman—Brick Works.**—The Harriman Brick & Building Co. is reported as to put additional machinery in its brick works.

**Harriman—Saw Mill.**—Labun Ellis has leased and will operate the Harriman saw mill, as lately reported.

**Knoxville—Ice Factory, &c.**—Biddle Bros. will erect an ice factory and ice machinery works, as stated in last issue.\*

**Knoxville—Machine Works.**—The Enterprise Machine Works has put in additional machinery, and will add an iron foundry to its plant.\*

**Lenoira—Saw Mills.**—Lansing and Ionia (Mich.) parties will probably erect the two saw mills mentioned in last issue as to be erected.

**Lenoira Lumber Mill.**—Maxwell & Youmans, of Knoxville, have purchased site and will, it is reported, erect a lumber mill at Lenoira.

**Memphis—Concrete Works.**—A. Cordes, W. A. Faires, J. A. Cross and others have incorporated the Southern Post & Concrete Building & Paving Co. to manufacture the Stunpel patent concrete post, etc.

**Memphis—Furniture Factory.**—Omaha (Nebr.) capitalists are investigating with a view of establishing in Memphis a school and office furniture factory. Secretary Commercial Association can give information.

**Memphis—Basket Factory.**—Ohio parties have, it is stated, made a proposition to the Commercial Association to remove a grape and berry basket factory to Memphis.

**Memphis—Stone Mill.**—Dewar, Grandison & Co. will erect a stone mill, as recently stated.

**Nashville—Stock-yards.**—W. H. Silberhorn, M. S. Cockrill, L. T. Baxter and others have incorporated the Great Southern Stock-yards to establish the stock-yards previously mentioned.

**Tazewell—Lumber Mill.**—J. C. Carr and others have organized the Powells River Lumber Co. to operate a lumber mill on Powells river.

#### TEXAS.

**Austin—Foundry and Machine Shops.**—The Lone Star Ice Works will probably establish a foundry and machine shop.

**Beaumont—Car Works.**—New Hampshire and Beaumont parties have organized the Beaumont Car Works, as recently reported, to erect car works.

**Beaumont—Saw Mill.**—A \$300,000 stock company is reported as having been organized for the purpose of erecting another saw mill on Collier's ferry. Mr. Russell can give information.

**Beaumont—Furniture Factory.**—A furniture factory will, it is stated, be established.

**Brownwood—Cotton Compress.**—W. W. Roberts, of Tyler, and others are, it is stated, organizing a \$30,000 stock company to erect a cotton compress.

**Corpus Christi—Cotton Mill.**—The board of trade is in correspondence with New England capitalists relative to the establishment in Corpus Christi of a cotton mill.

**Dallas—Ice Factory, &c.**—C. W. Dowley, of Denison, is president, and R. Myrick, of Fort Smith, Ark., secretary, of the Dallas Ice Factory & Cold Storage Co., reported in last issue. It is stated that the company will erect a plant with a capacity of 150 tons per day.

**Fort Worth—Clothing Factory.**—An Ohio party is, it is stated, investigating with a view of establishing a clothing factory in Fort Worth. The Martin-Brown Co. can give information.

**Galveston—Improvements.**—The city will petition the legislature for authority to issue \$1,500,000 of bonds for improvements.

**Galveston—New Town.**—It is reported that the Messrs. Armour, of Chicago, Ill., are interested in a movement to build a new town on the island west of Galveston to be called New Liverpool, offer inducements to manufacturers, &c.

**Galveston—Bridge.**—The construction of a bridge from Galveston to the mainland is talked of.

**Grundyville—Cotton Gin.**—The Grundyville Ginning Co., previously reported as incorporated, has erected a cotton gin.

**Laredo—Foundry and Machine Shops.**—R. E. Sanford, of Columbus, Ohio, is reported as having purchased the iron foundry and machine shops of the Laredo Foundry & Machine Co., and will put in \$7,000 worth of new machinery and operate same.

**Orange—Electric-light Plant, &c.**—The Orange Ice, Light & Water Works Co. is reported as erecting the electric light plant lately reported.

**San Antonio—Paint Factory.**—The San Antonio Paint Manufacturing Co. has been organized with Samuel Maverick as president, and A. H. Cadwallader, secretary, to establish a rubber paint factory.

**Townsen's Mills—Cotton Gin.**—Townsen & Townsen have erected the cotton gin lately mentioned.

**Waco—Planing Mill.**—J. E. Ulander has erected the planing mill lately mentioned.\*

**Waco—Machine Shops.**—The Houston & Texas Central Railway Co. (office, Houston, Texas) will, it is rumored, move its Sulphur Springs machine shops to Waco.

**Walk—Cotton Gin.**—A cotton gin is in course of erection.

#### VIRGINIA.

**Amherst C. H.—Harness and Saddle Factory and Tannery.**—W. E. Hughes has purchased the Amherst tannery and will, it is reported, improve and operate it, and establish a harness and saddle factory in connection.

**Bedford City—Electric-light Plant.**—The Bedford Electric Co. is reported as to put new machinery in its electric-light plant.

**Buchanan—Manufacture.**—The Central Land Co. is negotiating with a Northern company for the removal of its steam manufactory to Buchanan.

**Buchanan—Sash, Door and Blind Factory.**—Contract has been let and work begun on the erection of a sash, door and blind factory. E. Dillon can give information.

**Buena Vista—Manufacturing, &c.**—The Pennsylvania Investment Co. has been incorporated with S. F. Kelly as president; C. W. Keander, vice-president, and O. S. Keely as secretary, all of Philadelphia, Pa.; its purpose is dealing in real estate, manufacturing, mining, &c. The capital stock is to be from \$30,000 to \$150,000.

**Buena Vista—Real Estate, &c.**—The Equity Building Co. has been incorporated with F. Sittlerding, of Richmond, as president; B. C. Moo-

maw, vice-president, and J. T. Stuart, secretary, to deal in real estate, &c. The capital stock is to be from \$10,000 to \$100,000.

**Buena Vista—Car Works, &c.**—The Virginia Car Co. has been incorporated with A. S. Buford, of Richmond, as president; F. H. Foster, of Glasgow, vice-president, and Charles Conway, of Richmond, secretary, to build the car works previously mentioned. &c. The capital stock is to be from \$100,000 to \$1,000,000.

**Buena Vista—Steel Plant.**—The Buena Vista Steel Co. has been incorporated with C. M. Clark, of Philadelphia, Pa., as president; A. T. Barclay, vice-president, and G. F. Baker, secretary, to construct the steel plant previously mentioned. The capital stock is to be from \$250,000 to \$1,000,000.

**Buena Vista—Real Estate.**—The Virginia Investment & Development Co. has been incorporated with J. W. Blackburn as president; T. L. Alfriend, vice-president, and J. T. Stuart, secretary, to deal in real estate, &c. The capital stock is to be from \$50,000 to \$1,000,000.

**Buena Vista—Glass Factory.**—The Buena Vista Glass Co. has been organized with W. H. Ruffner, of Rockbridge, president, and R. F. Laren, of Greenville, secretary, to erect the glass factory lately mentioned. It is stated that the company has purchased 720 acres of land, on which it will develop white glass sand deposits. The capital stock is \$400,000.

**Carnegie City—Foundry and Machine Shop.**—A stock company, recently organized with W. A. Carpenter, president, and John Flits, general manager, has established the foundry and machine shop mentioned in last issue.\*

**Clifton Forge—Planing Mill.**—W. C. Moody and J. C. Carpenter will probably erect a planing mill.

**Courtland—Butter-dish Factory.**—It is reported that a butter-dish factory is being erected.

**Fredericksburg—Saw Mill.**—T. F. Stonebraker has started a saw mill.\*

**Danville—Tobacco Factory.**—Dula & Cobb are reported as to erect a new tobacco factory.

**Danville—Land.**—The Mount Vernon Villa Co. has been organized with T. B. Fitzgerald, president; J. H. Schoolfield, vice-president, and W. W. Waddill, secretary, and has, it is stated, purchased the Harrison Robertson, the Wyllie and the Waddill tracts of land in the West End, and will improve same.

**Gate City (P. O. at Estillville)—Planing Mill.**—The Estillville Planing Mill Co., lately mentioned, contemplates putting furniture, sash, door and blind machinery in its planing mill.\*

**Gladesville—Saw and Planing Mill.**—The Gladesville Building Co. is reported as erecting a saw and planing mill.

**Glasgow—Bridge.**—The Glenwood Land Co. is reported as having let contract for the construction of a bridge across James river to connect its lands with Glasgow.

**Glasgow—Land Improvement, &c.**—The Glasgow Development Co., reported in last issue, will issue \$750,000 of stock to improve and develop its property, locate industries, &c.

**Luray—Iron Foundry and Machine Shops.**—The Broadway Machine Co., of Broadway, will remove, it is reported, its machine shop and foundry to Luray, and double its capacity.

**Luray—Woodworking Factory.**—The Luray Artistic Wood Co., recently mentioned, has been incorporated with W. C. Chase as president, and is now erecting its fancy woodworking factory. Capital stock is \$150,000.

**Luray—Improvement, &c.**—The Page County Building & Improvement Co. has been organized with Walter Campbell as president and C. T. Holtzman, secretary, and with a capital stock of not less than \$10,000 nor more than \$100,000. This is the building, investment and improvement company recently referred to.

**Luray—Chair and Furniture Factory, &c.**—A novelty wood and lock works and a chair and furniture factory will be erected, as reported in last issue. The Valley Land & Improvement Co. can give information.

**Luray—Iron Foundry, Machine Shops, &c.**—A \$100,000 stock company with S. G. Gilmore as president is reported as organized to establish a foundry, machine shops and plow works.

**Lynchburg—Railway Signal Factory.**—The Railway Automatic Signal Co. has been organized with T. N. Davis as president and T. J. Ingram, secretary, to manufacture Alexander Robertson's railway automatic signal. The capital stock is \$100,000.

**Max Meadows—Sash, Door and Blind Factory.**—J. E. Offner, of Roanoke, will erect a sash, door and blind factory at Max Meadows, as recently stated.

**Mendota—Oil Wells.**—H. H. Hamilton has, it is stated, organized a stock company to sink coal oil wells.

**Norfolk—Real Estate.**—The West End Real Estate Co. has been incorporated with G. R. Dunn as president; F. M. Kellam, vice-president, and T. H. Gilliam, secretary, for the purpose of dealing in real estate. The capital stock is to be not less than \$175,000 nor more than \$300,000.

Norfolk—Land.—The Seaboard Land & Improvement Co. has been incorporated with Walter Sharp as president; W. S. Franklin, vice-president, and K. C. Murray, secretary, to purchase and improve land, etc. The capital stock is to be not less than \$30,000 nor more than \$100,000.

Norfolk—Manufacturing.—The Norfolk Industrial Land Co., reported last week, has a capital stock of \$1,000,000.

Pulaski City—Carriage Factory.—The Pulaski Carriage Co. will, it is stated, add the manufacture of wagons to its carriage factory.

Radford—Ice Factory.—The Virginia Ice Co., previously reported as organized to erect an ice factory in Radford, will also probably erect plants at other points in Virginia.\*

Riverton—Cracker Factory.—A stock company has been organized with G. W. Cone, treasurer, to establish the cracker factory lately mentioned.\*

Roanoke—Electric-light Plant.—The Crozer Iron Co. will, it is reported, erect an electric-light plant at its iron furnaces.

Roanoke—Power-house.—The Roanoke Electric Railway Co. is reported as to establish a power-house.

Roanoke—Real Estate.—The Montague Heights Land & Improvement Co. has been incorporated with J. H. Montague, president, and G. J. Rogers, secretary, to purchase and improve real estate, &c. The capital stock is to be not less than \$100,000 nor more than \$500,000.

Roanoke—Real Estate.—The Artisans' Investment Co. has been incorporated with G. R. Henderson, president; D. J. Worthington, vice-president, and A. L. Treman, secretary, to deal in real estate. The capital stock is \$10,000, with privilege of increasing to \$25,000.

Salem—Woolen Mill, &c.—Contracts are reported as having been closed for the establishment of a woolen mill, clothing factory and machine works. The Salem Development Co. can give information.

Salem—Rolling Mill, etc.—The several land companies operating at Salem have appropriated \$550,000 for the establishment of a \$100,000 rolling mill, a \$75,000 muck bar mill, \$50,000 iron works and \$75,000 for the cotton mill and \$100,000 for the car works previously mentioned. The Salem Development Co. can give information.

Salem—Sewerage System.—A sewerage system is reported as to be constructed.

Salem—Bridges.—The Salem Improvement Co., previously mentioned, is reported as to construct two more bridges across the Roanoke river.

Shendun—Flour Mill and Grain Elevator.—The Shendun Roller Mill & Elevator Co. is reported as being organized to erect a roller flour mill and grain elevator. The capital stock is to be \$35,000.

Shendun—Brick Works.—R. J. Law, of Lexington, Ky., will, it is reported, organize a stock company to establish brick works in Shendun.

Shenandoah—Carriage, Buggy and Wagon Factory.—G. T. Williams & Co., of Cincinnati, Ohio, are reported as having signed contract with the Shenandoah Land & Improvement Co. for the erection, in Shenandoah, of a carriage, buggy and wagon factory to be 100x130 feet.

Staunton—Iron Works.—William E. Craig has, it is stated, purchased the Old Staunton Iron Works property from J. D. Crowle and others for \$10,000.

Staunton—Flour Mill.—The Staunton Steam Roller Mill Co. will erect a 200-barrel flour mill, as recently stated.\*

Staunton—Real Estate.—The Stonewall Investment Co. is the proper name of the real estate company recently reported as the Staunton Investment Co.

Staunton—Publishing.—A stock company will, it is stated, be organized for the purpose of publishing a newspaper.

Suffolk—Dry-kilns.—Andrews & Johnson are reported as building three new dry-kilns.

Suffolk—Boiler and Engine Works.—Report has it that boiler and engine works with a capital stock of \$20,000 will be established. The East Suffolk Land Co. can give information.

Warrenton—Cheese Factory.—Kingsley & Bro. are reported as to establish a cheese factory.

Winchester—Packing house.—A \$30,000 stock company is reported as to be organized for the purpose of establishing a pork and beef packing-house.

Wytheville—Brick Works.—S. R. Huffard will, it is reported, put additional machinery in his brick works.

Wytheville—Spoke and Hub Factory, &c.—A spoke and hub factory and a mantle and grate factory are reported as to be established. The Wytheville Development Co. can give information.

#### WEST VIRGINIA.

Cedar Grove—Land, &c.—The Cedar Grove Industrial Co. was recently incorporated with R. A. Woodbridge, of Baltimore, Md., as president; C. C. Tompkins, of Salem, Va., as vice-president, and C. H. Grasty, of Baltimore, Md., as secretary. The company controls 105 acres of town-site property and 1,300 acres of coal land, which it will probably improve and develop.

Charleston—Oil and Gas Wells.—The Blaine Oil & Gas Co. and the Logan Oil & Gas Co., lately reported, have consolidated under the name of the Logan Oil & Gas Co. The company has leased a tract of land in West Virginia, on which it will sink oil and gas wells.

Grafton—Oil Wells.—Rector Bros. will sink oil wells.

Huntington—Gas Works.—It is stated that F. B. Enslow, D. W. Emmons, J. H. Russell and others are having plans prepared with a view of building gas works.

Huntington—Factory.—A New York party is reported as to erect a factory in Huntington. Secretary Board of Trade can give information.

Milton—Excelsior Factory and Planing Mill.—S. W. Neville, W. O. Walton, C. H. Morris and others have, it is stated, purchased the Star Mill property, and will put in planing mill machinery and manufacture excelsior.

New Cumberland—Fire-brick Works.—Smith, Porter & Co. have, it is stated, put new drying apparatus in their fire-brick works at a cost of \$8,000.

Parkersburg—Gas and Oil Wells, &c.—The Gabe Oil Co., reported in last issue, has for its object the mining and producing of oil, coal and gas.

Ravenswood—Saw Mills.—David L. mlet, of Lancaster, Ohio, is reported as having started, in Ravenswood, two portable saw mills, and as to erect a stationary mill.

Short Creek—Tile Factory.—The Windsor Tiling Co. will, it is stated, increase its capital stock \$20,000.

Wheeling—Coal Mines.—J. F. Paull, Alfred Paull, J. C. Alderson and others have incorporated the Forest Coal Co.

#### BURNED.

Baton Rouge, La.—The sugar-house of J. S. Hugnet, near Baton Rouge.

Beech Island, S. C.—The cotton gin of E. H. Atkinson; loss \$3,000.

Cartersville, Ga.—The cotton gin of J. J. Howard.

Center, Texas.—B. C. Reed's cotton gin.

Chappell Hill, Texas.—The cotton gin of John Routt.

Chattanooga, Tenn.—The foundry of the Chattanooga Car & Foundry Co.

Corsicana, Texas.—The cotton gin of George Hodge, near Corsicana.

Dallas, Texas.—The planing mills of Leeds & Conkling; estimated loss \$20,000.

Emory, Miss.—The saw mill of C. B. Alexander, near Emory.

Floyd, Texas.—The cotton gin of Winfrey, Eldridge & Pierce.

Greenville, N. C.—The cotton gin of R. A. Tyson.

Greenville, Texas.—The cotton gin of Dial & Son.

Hazlehurst, Ga.—A turpentine distillery near Hazlehurst.

McKinney, Texas.—The cotton gin of the St. Paul Alliance.

Nashville, Tenn.—The tobacco factory of Mr. Sewell, in South Nashville.

Owensboro, Ky.—The Ruddy House, the buildings of A. J. Wadley, D. Ryan, the Bank of Commerce and a number of other buildings; loss said to be \$250,000.

Petersburg, Va.—The engine-house of the Petersburg Granite Quarrying Co., near Petersburg.

Port Deposit, Md.—The electric-light building of the Port Deposit Electric Light Co.; estimated loss \$5,000.

Richmond, Ky.—The roller flour mill of Che-nault, Burnam & Co.; estimated loss \$43,000.

Rosedale, Miss.—The cotton gin of Charles Scott.

Shreveport, La.—The buildings of H. Sour & Co., S. G. Drefus & Co., E. J. Lemans, Hicks & Hicks and others; loss estimated from \$350,000 to \$400,000.

Society Hill, Ala.—The cotton gin of Robert Floyd, near Society Hill.

Summit, Miss.—The cotton gin, grist and saw mill of George Stewart, near Summit.

Surrounded Hill, Ark.—The cotton gin of A. L. Aydelotte & Co.

Thomaston, Ga.—The Alliance Cotton Ginney destroyed by boiler explosion.

Tunis, N. C.—The dry-kiln of the Tunis Lumber Co.; estimated loss \$10,000.

Weldon, N. C.—The cotton gin of Newet Grant, in Northampton county.

Winfield, Md.—The creamery and ice cream factory of H. M. Zile; loss about \$4,000.

## Building Notes.

Abilene, Texas.—College.—The Sweetwater Association of the Baptist Church will build a college for females in Abilene.

Anderson, Texas.—Courthouse.—J. A. & J. O. Wilson, of Sulphur Springs, have secured contract at \$40,000 for building the courthouse previously mentioned. Larmour & Watson prepared the plans.

Aranas Pass, Texas.—Schoolhouse.—A new schoolhouse to cost from \$20,000 to \$25,000 will probably be built.

Arcadia, Fla.—Church.—The Presbyterians contemplate building a new church.

Atlanta, Ga.—Schoolhouse.—The Atlanta Suburban Land Co. contemplates erecting a school building.

Baltimore, Md.—Hospital.—It is contemplated to build a wing costing about \$32,000 to the Nursery and Child's Hospital.

Baltimore, Md.—Masonic Hall.—The colored Masons propose building a Masonic hall to cost about \$20,000.

Baltimore, Md.—Permits have been granted to Justus Miller for 2 three-story houses, and to J. Horton Medinger for 3 two-story houses.

Baltimore, Md.—Church.—A new edifice will be built for the High Street Baptist Church.

Baltimore, Md.—College.—It is proposed to erect an art building and a preparatory school for the Woman's College. Rev. J. F. Goucher can give particulars.

Baltimore, Md.—Rev. J. F. Goucher will build a three-story dwelling on St. Paul street.

Baltimore, Md.—Seminary.—Baldwin & Pennington have prepared plans for an extension to be built to the northern wing of St. Mary's Seminary, to be six stories high and to cost \$40,000.

Baltimore, Md.—Warehouse.—E. D. Onion will erect a four story warehouse.

Baltimore, Md.—Building permits have been granted to J. C. & W. N. Dowling for 8 two-story houses, and to John Forte for 9 two-story houses.

Bessemer (P. O. Eagle Rock), Va.—Hotel.—The Craig Valley Co. will probably build a hotel to cost \$25,000.

Big Stone Gap, Va.—The Building & Investment Co. has been organized with R. T. Irvin, president, and C. H. Berryman, secretary, for the purpose of building cottages. The capital stock is \$50,000.

Birmingham, Ala.—M. L. Potter will erect a three-story brick building to cost \$16,000.

Brookhaven, Miss.—Schoolhouse.—J. M. Tedford has secured contract to build a two-story brick schoolhouse.

Brookhaven, Miss.—Rev. Father Lonergan will, it is stated, erect a convent building.

Brownsville, Texas.—Public Building.—James H. Windrim, supervising architect, Treasury Department, Washington, D. C., will receive proposals until November 25 for all the labor and materials required in the erection and completion of the United States courthouse, custom-house and postoffice building.

Catawba, S. C.—Hotel.—A hotel is reported as to be built.

Chattanooga, Tenn.—J. C. Hutchinson, of Georgia, has awarded contract for building 4 two story residences to W. H. Floyd.

Clifton Forge, Va.—Church.—A church will probably be built for the Baptists.

Clifton Forge, Va.—Hall.—The Independent Order of Odd Fellows contemplate building a hall.

Clifton Forge, Va.—Hotel.—B. F. Bagley has contract for building the \$10,000 hotel, previously mentioned.

Cumberland Gap, Tenn.—Sanitarium.—Stephenson, Getaz & Co., of Knoxville, have been awarded contract for building a \$50,000 sanitarium.

Dadeville, Ala.—Jail.—The Pauly Jail Building & Manufacturing Co., of St. Louis, Mo., have secured contract for the erection of a jail.

Denison, Texas.—J. F. Jordan has secured contract for the building of 4 houses for R. G. Ellis, of New Orleans, La.

Durham, N. C.—Bank Building.—The First National Bank contemplates erecting a three-story bank building to cost about \$25,000.

Elberton, Ga.—Hotel.—W. C. Smith & Bro. will erect a block of buildings which may include the hotel lately mentioned.

Erwin, Tenn.—Hotel.—W. H. Floyd, of Chattanooga, has prepared plans for the erection of a hotel.

Florence, S. C.—George Stackley will build 4 dwellings, and C. Morgan a two-story brick store and dwelling.

Fort Payne, Ala.—Courthouse.—Bids for building the DeKalb county courthouse, previously reported, will be received until February 9, 1891. Chamberlin & Burford, of Knoxville, Tenn., are the architects.

Fort Worth, Texas—Church.—The members of St. Andrew's Episcopal Church will, it is stated, build a new edifice.

Fort Worth, Texas—Hotel.—E. E. Powell, Z. C. Ross, E. E. Chase and others have made a proposition to build a hotel 100x200 feet to cost about \$300,000, provided a bonus of \$37,000 is donated by the citizens.

Fort Worth, Texas—Hotel.—It is stated that a hotel will be built at Arlington Heights.

Fort Worth, Texas—French & Hirschfield will, it is stated, build a business house 50x100 feet.

Gainesville, Texas—College.—A college for females will probably be built on Boston Heights.

Gallatin, Tenn.—C. B. Brown, B. D. Ballard and Arthur Fitzgerald will, it is stated, build a three-story business house. #

Glasgow, Va.—Bank Building.—A new bank building will probably be erected for the Commercial Bank.

Glasgow, Va.—E. D. Swift & Co. and the companies that will build the powder mill and steel car works propose erecting a number of dwellings.

Glasgow, Va.—Contract is said to have been let for the building of 60 houses. The Rockbridge Co. can give particulars.

Harrisonburg, Va.—College.—Inducements are being offered for the location of a college for colored pupils. Rev. Drs. F. J. Wagner and J. F. Goucher, of Baltimore, Md., are interested.

Harrisonburg, Va.—Depot.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) contemplates building a new passenger depot.

Harrisonburg, Va.—Church.—The members of the Presbyterian Church will build a new edifice.

Helena, Ark.—Public Building.—J. H. Windrim, supervising architect, Treasury Department, Washington, D. C., will receive proposals until December 3 for all the labor and materials required for the erection and completion of the United States courthouse and postoffice building.

Hot Springs, Ark.—Club Building.—A company is being formed for the purpose of erecting a club building.

Hot Springs, Ark.—The Mercantile Building Co. has been incorporated with W. J. Little, president, and E. Hogaboom, secretary. The capital stock is \$50,000.

Lenoirs, Tenn.—J. W. Thompson has prepared plans for a two-story building 25x75 feet for A. M. Hough to cost \$5,500.

Lenoirs, Tenn.—Bank Building.—J. W. Thompson has secured contract for the erection of a three story bank and office building 25x50 feet for the Lenoirs City Co. Elevator, electric bells, etc., will be put in.

Lexington, Ky.—Church.—The members of the Broadway Christian Church contemplate building a new edifice to cost about \$18,000. Rev. Lynn Cave can give information.

Little Rock, Ark.—Warehouse.—F. J. H. Rickon is preparing plans for a four story brick store and warehouse for W. W. Dickinson and T. J. Darraugh to cost \$20,000.

Lynchburg, Va.—Natorium.—The Young Men's Christian Association contemplates erecting a three-story natatorium building to cost about \$7,500. W. F. McCaughey can give particulars.

Memphis, Tenn.—The new Memphis Jockey Club is having plans prepared for building the combined iron and wood grand-stand lately referred to.

Middlesborough, Ky.—Hotel.—M. C. Alford and others contemplate building a hotel to be known as the Alford House at a cost of about \$75,000.

New Birmingham, Texas—Church.—Contract has been let for the building of a new edifice for the Presbyterian Church.

Oxford, N. C.—Hotel.—The erection of a hotel is rumored.

Pineville, Ky.—City Hall.—A three-story city hall will probably be built to cost \$15,000.

Pulaski, Tenn.—W. P. Tinsley, of Lynchburg, has prepared plans for the erection of a three-story building 50x117 feet for L. S. Calfee to cost \$10,000.

Richmond, Va.—C. T. Davis, mentioned in last issue, contemplates building 4 four-story stores to cost about \$48,000.

Roanoke, Va.—Churches.—The Methodist Episcopal Church South contemplates building 2 edifices at a probable cost of \$60,000. T. T. Fishburne or J. A. Gale can give information.

Saginaw, Texas.—Schoolhouse.—A schoolhouse to cost \$14,000 will be built.

Sheffield, Ala.—Union Depot.—The Memphis & Charleston Railroad Co. (office, Memphis, Tenn.), Louisville & Nashville (office, Louisville, Ky.) and the Birmingham, Sheffield & Tennessee River Railroad will build a union depot, as lately stated, and contract will probably be awarded shortly.

Shendun, Va.—The Exchange Building Co. has been organized with B. B. Bouldin, president, and James W. Rumble, secretary, to erect a building for a real estate exchange.



Shenando, Va.—Church.—The members of Mt. Horeb Presbyterian Church contemplate building a new edifice.

Shiner, Texas.—Church.—The congregation of the Catholic church contemplate building a new structure 40x60 feet.

Sligo, Md.—W. J. Marsh, of Washington, D. C., has prepared plans for a 2½-story cottage 43x77 feet for C. S. Noyes, of Washington, D. C., to cost \$15,000.

Union, Tenn. (P. O. Johnson City).—Hotel.—W. H. Floyd, of Chattanooga, has prepared plans for the building of a hotel.

Waco, Texas.—Church.—The German Baptist Church contemplates building a chapel.

Washington, D. C.—A four-story residence 21x50 feet is to be built for Mrs. Julia Norton. It is to have electric bells, heating apparatus, etc., and cost \$25,000. The plans were made by W. B. Gay.

Washington, D. C.—J. S. Bass will erect 3 two-story dwellings; H. P. & S. D. Moore, 4 two-story brick dwellings to cost \$8,000; Rev. E. A. McGurk, 7 two-story dwellings to cost \$22,000; W. H. Pearce, a three-story residence, 22x55 feet, to cost \$10,000—electric bells and heating apparatus will be put in; J. Germlinger has plans for a three-story building, 21x69 feet, to cost \$6,500.

Washington, D. C.—Miss D. G. Litchfield will build a three-story brick and stone residence, 44½x48 feet, to have electric bells, heating apparatus, etc. Hornblower & Marshall prepared the plans, and Alexander Millar has contract. The cost will be \$35,000.

Winnabow, S. C.—Depot.—The Charleston, Columbia & Augusta Railroad Co. (office, Columbia) contemplates building a new passenger depot.

### Notes From Dallas.

DALLAS, TEXAS, November 6, 1890.

*Editor Manufacturers' Record:*

The great State Fair and Exposition has closed, and Dallas has settled down again to business. Inquiry for real estate is on the increase, and sales are larger than they were a month ago. Many new improvements are being projected with the view of putting them through next spring, and every indication shows that the city has lost none of its vigorous growth. A company has been chartered and organized with a paid-up capital of \$300,000, for the purpose of establishing in this city one of the largest ice manufacturing plants in the country. The proposed daily capacity is 150 tons. The company is composed of C. W. Dowley, of Denison, president; R. Myrick of Fort Smith, Ark., secretary and general manager; R. C. Shearman, of Denison, treasurer; G. L. Blockford, of Denison, and J. S. Ambrose, a Springfield, Mo., capitalist, directors. It is proposed to make Dallas the ice distributing point for North Texas, and to do a large business in cold storage. The buildings for the reception of the plant are in course of construction. The cost of the enterprise is the measure of its magnitude and on a par with the growth and mercantile importance of the city.

The Consolidated Traction Railway Co., which operates a out 30 miles of street railway in Dallas, will build a power-house and put in one of the finest electric plants in the country, with machine and repair shops. The company is supplanting the mule cars with electric motor cars as rapidly as possible.

The city council has taken preliminary steps looking to an artesian well source for the public water supply, and several deep wells will probably be put down in the near future.

The foundation has been laid for the \$90,000 courthouse, and the first-story wall, which is to be of blue granite, is being put in. The other story walls will be composed of a beautiful red stone, which resembles the Lake Superior stone, and trimmed with blue granite. This will be one of the finest public buildings in the country.

The last monthly statement of business in the postoffice showed a twelve-month increase of 23 per cent.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

## AN ENGLISH JOURNAL ON THE SOUTH.

### The London "City Leader's" Comments Apropos of the Visit of the Iron and Steel Institute.

In commenting on the growth of the South as shown by statistics furnished to it by the MANUFACTURERS' RECORD, the "City Leader," of London, says:

"The city is full of rumors regarding a coming boom in American lands. Extraordinary statements are being made as to the enormous mineral wealth of the Southern States, which, if correct, must make that district the bonanza of the future. Sir Lowthian Bell's advice to the members of the Iron and Steel Institute, to inspect the iron works of the Southern States, 'where the national resources are so enormous,' has done much to direct the English mind to the wonderful developments now in progress in those districts. The return of the delegates is awaited with some expectation, as their statements will, we think, be favorable to the country; for no one can study the remarkable combination of resources which the South enjoys without being convinced that, in natural advantages, this section of the country stands far ahead of any other country in the world. In climate, soil, rivers, mineral and timber wealth nature seems to have done her very best for the South. Although crippled by a disastrous and deplorable war, she is now again leading the van of American progress. And it is largely Northern capital which is aiding her in her rise, and finally cementing a union that legislation could never perfect. The whole country pulsates with industrial activity. Districts which a few years back were wholly occupied by farms, or which were unreclaimed from the forest, are now becoming centers of important manufacturing and commercial industries. The cry is no longer 'Go West, young man,' but 'Go South.' Pennsylvania iron-masters are realizing the meaning of this Southern competition in coal and iron, whilst many Northern industries are being transferred *en bloc* to the more favorable district where material and transportation are cheaper.

There is no doubt but that the center of industrial development is gradually being transformed from the North to the South. Mr. Carnegie, indeed, regards the South 'as Pennsylvania's most formidable industrial enemy in the future.' Another authority, the Hon. Chauncey M. Depew, says 'the South is the bonanza of the future,' while equally potent is the statement made by Hon. W. D. Kelley, 'the South is the coming El Dorado of American adventure.' But coming nearer home, and to an authority better known to English people, we will quote Sir Lowthian Bell. He states: 'Ultimately there seems nothing, so far as our present knowledge permits us to judge, to prevent these Southern States from becoming the cheapest iron-making centers in the Union,' a prophecy not far from fulfillment. Despite Wall Street manipulations, despite low prices of iron and steel, and all other causes which generally retard the development of a country, the South is still moving forward with accelerated step. Nothing seems to check it. From the Potomac river to the Rio Grande there is nothing but progress. Ten years ago the wealth of the United States was computed at \$44,000,000,000; now that wealth is estimated to be \$64,000,000,000, an increase of \$20,000,000,000 for every year during the past decade. How rapid the tide is flowing Southward a few hard facts will show. The miles of railroad built in the United States during the first half of the present year were 1,898 miles, of which 1,114 were built in the South.

Even increased railway facilities cannot cope with the amount of freight business

the Southern railroads have placed in their hands. During the past nine months upwards of 3,000 new enterprises, including almost every new line of industry, from the small saw mill to the great steel and iron works, have been organized, whilst the first week of last July saw started over 12 industrial undertakings, the aggregate capital of which exceeded \$12,000,000. Take, finally, the furnace increase. Of the 36 iron furnaces now under construction in the United States, 25 are in the South. Moreover, while there are few or no other new furnaces projected in other parts of the country, there are probably at least 20 that will be put under contract in the South during the next few months. Such details are significant enough. But admitting all this industrial activity, the question naturally suggests itself, Is the boom likely to be a real one? or, to use an Americanism, has it come to stay? After a personal inspection of those districts most affected by the progressive movement, we are bound to confess that we have considerable faith in the boom.

Speaking generally, we believe the Southern boom to be a real and solid affair. The resources of coal and iron are inexhaustible. The minerals crop out upon the sides of the valley and give no trouble in working, whilst trucks can be loaded by gravitation from the mines. The important point, however, is that most of the furnaces of the Southern States have their supplies of iron ore, coal and limestone at their doors. Consequently, in the important item of transportation alone they have a great advantage over their competitors in Pennsylvania and other Northern and Western States, whose freight bills are particularly heavy. Further, the Southern iron-masters have generally water transportation of the most perfect kind, which has the beneficial effect of keeping down railroad rates. Hence, whilst new furnaces are rapidly being blown in in the South, despite declining prices, many of the Pennsylvania furnaces are lying idle in preference to selling their products without a margin of profit or at actual loss."

### Hagerstown.

This "magic city" of the Cumberland valley is still forging ahead. In spite of many discouragements, and that, too, from some of her own people, she has gone on steadily developing until she now stands ahead of any town of her size in the South. The population of Hagerstown in 1885 was 5,000, and the claim for it before taking of the late census was 11,000, but the recent enumeration by the census commissioners brings it up to 13,000. The Hagerstown Manufacturing, Mining & Land Improvement Co., a progressive organization, will offer for sale at auction on December 9 and 10 a collection of choice residence and building lots. This will be the third great sale held at this place, and many who were debarr'd from attending the last sale will now be given another opportunity of visiting this aggressive city. The mineral deposits around Hagerstown are of great value, its manufacturing industries are operated on the most aggressive scale, and as a city of residence it is unsurpassed by any in Maryland. Its railroad facilities are quite exceptional, there being 50 trains per day bringing their quota of trade to this thriving city. Among the recently organized industries are the bicycle works, glass works, &c. The Hagerstown Silk Mill will in a few weeks erect a new and handsome factory containing 100 looms for the manufacture of ribbons. This industry paid its stockholders last year 20½ per cent. dividend, and with its new building this will be very materially increased. For particulars of the third great sale of the 9th and 10th December, apply to J. Glenn Cook & Co.

### The Carrollton Factory.

ABERDEEN, MISS., Nov. 1, 1890.

*Editor Manufacturers' Record:*

Last week while we were in Carrollton, the county seat of Carroll county, Mississippi, Mr. A. E. Randle, of Washington city and New York—a native of Clay county, Mississippi—whose name is familiar to you in connection with Southern investments in the timber and mineral regions of Alabama, Mississippi and West Virginia, and as the projector of two beautiful villages in the vicinity of Washington (Ardwick and Congress Heights), put on record a deed conveying to him, for \$100,000, the magnificent property known as the "Carrollton Factory."

This property, including a tract of 700 acres of surrounding land, lies just beyond the town limits, and comprises two structures and some 16 houses for employes. The main building is, 138x330 feet, 2½ stories high, of masonry, and is the best built and most substantial building, in all respects, that it has ever been our lot to examine. The foundation walls are five feet thick, and walls of first story 32 inches, and although the work was all done before the war, the entire mass of masonry is as perfect as when the trowels were laid by. The timbers in this building were all cut and fashioned on the grounds, and surpass in quality any that we have ever seen anywhere North, South, East or West.

In the engine-room we found two splendid Corliss engines, of 100 horse-power each, in first-class condition, and we have never seen shafting more admirable in quality or better hung. The building is splendidly ventilated, and hundreds of windows afford light to the vast machinery halls. While there we found Mr. Randle actively engaged in making contracts with mechanics for such necessary repairs—large in aggregate but trifling in detail—as were essential to putting the building in thorough condition for the reception of additional plant for the manufacture of cotton and woolen goods on a scale commensurate with the capacity of the buildings and facilities of the location. These repairs will probably all be completed before the first of December, and it is expected that the factory will be under full headway ere the next cotton crop is made.

Located on the border line dividing the regions of the glorious upland cottons of Mississippi from those of the famous Yazoo delta long staples, and near enough to both to admit of obtaining full mill supply in plantation, uncompressed bales from the producers' wagons, it may well claim to be the best located cotton factory in the Southern States, if not in America. In addition to this, it is convenient to the region that supplies the wonderful "piney woods wools" and "lake wools" that have enabled the Mississippi Mills, at Wesson, Miss., to excel all other American factories in character of fabrics at every exposition where they have competed.

The Mississippi Mills, at Wesson, in Copiah county, started, you remember, after the fire of 1872, on a capital of \$300,000, and now have a plant valued at \$2,000,000 and a surplus of \$500,000 which they propose to put in "mill No. 4" in the near future, and it is the belief of those familiar with the advantages of buildings and location of the Carrollton Factory that its future will be a reflex of that of the great establishment above mentioned.

It is understood that the Georgia Pacific Railroad will build such switches as may be necessary to afford perfect shipping facilities to these mills, and it is almost certain that the Illinois Central—10 or 12 miles distant—will build a branch to this factory from Winona or some nearer point. Its owners are people who do not allow the grass to grow under their feet, and from now on all will be bustle and life in Carrollton and vicinity.

J.

## Buena Vista Notes.

BUENA VISTA, NOV. 10, 1890.

*Editor Manufacturers' Record:*

The matter of greatest interest at present is still the sale of 500 of the Buena Vista Co.'s residence and villa lots, to be held the 19th and 20th inst. This undoubtedly will draw an immense crowd, since Buena Vista, though being the pioneer town in the present development, not desiring any stimulated boom, will now hold its first sale. It can almost be said with certainty that with our rapidly increasing population it is only a question of time when our limits will have to be extended, and the earlier purchases are made the better for the purchaser.

As an evidence of the profit almost sure to follow an investment here, stockholders in the company who have not disposed of their original holdings and lots are now reaping the reward of their patience in beholding themselves enriched many fold on account of the present high standard of values, against those who sold out their interests as soon as this increase became manifest. Lots have advanced 100 per cent. every 90 days during the last 12 months. The total amount of industries now established aggregates \$2,211,000, and negotiations now pending will bring additional plants with a capital of \$800,000. We already have 3,000 population, but this impetus should swell this number far greater by spring, or even double it in a year.

Instructions have been received by one of the managers of a building company operating here to push his work to completion preparatory to building \$75,000 worth of houses early in the spring.

Savannah, with its \$2,000,000 tin-plate works, will soon be connected with Buena Vista by the street railway which will be speedily constructed by the company organized. City methods have been followed from the beginning in laying off and building up Buena Vista. The city engineer now has a force at work on the streets laying sidewalks and graveling crossings.

ABERDEEN, MISS., rejoices in the organization of a company called the Tombigbee Iron Works, with a paid-up capital of \$50,000, and power to increase to \$250,000. This company will manufacture iron and brass goods. It is expected to put up buildings at once, and that the plant will be ready for business by the first of next February. Mr. Edward W. Ivins, of New Orleans, president of this company, owns iron works at Grand Haven, Mich., that will be transferred to Aberdeen. When the new factory is in operation the company proposes to put up a factory for the building of railway cars, for which business the adjacent forests will supply an abundance of excellent material at low prices.

STOCK-YARDS equal to those of Chicago and Kansas City are to be established at Nashville, Tenn., where the Great Southern Stock-yards Co. has been organized by Western and Tennessee capitalists. The stock of this corporation is \$1,000,000. A contract has been closed with the Nashville Land Improvement Co. for the purchase of 939 acres of property. On this, in addition to the stock-yards, will be two packing-houses, an exchange, hotel and various other buildings. The directors and officers of this company are: A. L. Garrettson, of Sioux City, Ia.; W. A. Alsdorf, of Lincoln, Neb.; W. H. Silberhorn, of Chicago; M. S. Cockrill, Edgar Jones, Spencer Eakin and L. T. Baxter, of Nashville. The directors elected the following officers: Lewis T. Baxter, president; M. S. Cockrill, vice-president; W. H. Silberhorn, general manager; W. A. Alsdorf, secretary and superintendent; Edgar Jones, treasurer.

## An Immense Cotton Crop.

Regarding the financial and commercial situation in the South there is interest and importance in this letter issued yesterday to their customers by Charles D. Freeman & Co.: "The government report on cotton, out this afternoon, makes the total acreage planted this season 19,590,000 acres, and estimates the total production 187 pounds lint per acre, making a probable total production of 3,663,330,000 pounds, which amount, divided by 465 pounds net to the bales, gives a probable crop of nearly 8,000,000 bales. This is a phenomenal showing, as the crop will exceed last year's by over 600,000 bales, which was the largest ever raised in this country."—New York Journal of Finance.

A crop of 7,750,000 to 8,000,000 bales will mean \$500,000,000 in cash brought into the South this year by cotton alone. This is a source of prosperity for that section the value of which cannot be computed. Since 1865 the South has received over \$8,000,000,000 for its cotton.

A REAL estate convention will assemble at Norfolk, Va., on Wednesday, the 19th inst., and remain in session two days. It has been called by the Real Estate Exchange of that city, which has issued invitations to all the real estate agents of Virginia and to many in adjoining States, to the press and to numerous citizens. The railroads have given reduced rates and the citizens generally are preparing to entertain their visitors with that generous hospitality for which Norfolk is noted. This is the first convention of the kind ever held in the South.

MANY men of note were present last Monday at the commencement of the semi-annual sale of the Middlesborough (Ky.) Land Co. Among those reported were the Hon. Ernst Hatch, Member of the Parliament from London; Col. Neville Parron and Major-General H. P. Ward, of the British army; J. G. Nutting, of E. & J. Burke, malsters, of Dublin; Mr. George M. Dickson, of the firm of Higginson & Co., coal-masters, Lancashire, England; Mr. George A. Porter, of Niagara Park fame; ex-Assistant Postmaster-General Clarkson, with a party of friends, among whom were Gen. R. A. Alger, of Michigan; Mr. George M. Pullman, of Illinois, and other prominent men.

J. E. BOLLES & CO.'S NEW FACTORY.—The contracts for J. E. Bolles & Co.'s iron works at Detroit, Mich., have been let and work is now progressing on the foundation walls. The plans were prepared by Gordon W. Lloyd, architect; Fairburn & Cogger are the mason contractors and Spitsley Bros. the carpenters. They expect to have the main building completed ready to occupy about February 1, 1891, this being the dull season and a convenient time to move. The main building will be three stories, 200 feet long by 60 feet deep, with a wing 60x80 feet for blacksmith shop, iron storage and engine-house. A 250-foot side-track connects their grounds with the Michigan Central Railroad, giving them the best of shipping facilities. When this building is completed J. E. Bolles & Co. will have the best-equipped factory in their line in the West. They are now filling a large order of ornamental railing for the new Tampa Bay Hotel at Tampa, Fla., besides many other contracts from various portions of the country. This firm produce only first-class work, and as a result have a large and growing trade from all parts of the country. Architects and builders requiring anything in the line of wrought or cast iron work for buildings, artistic grill work, brass or metal work, will do well to correspond with this firm.

## MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Artesian-well Machinery.—E. N. Orkney, Tyler, Texas, wants the latest improved well-sinking tools.

Band Saw.—W. T. Meers & Co., Waco, Texas, wants prices on band saws.

Blower and Cupola.—The Enterprise Machine Works, Knoxville, Tenn., wants a cupola and blower.

Boiler.—The Wheeling & Elm Grove Railroad, Wheeling, W. Va., wants a second hand 52-inch upright boiler.

Boiler and Engine.—The Golden Valley Hydraulic Mining Co., Golden, N. C., wants a boiler and engine.

Boiler and Engine.—J. A. Fauver, vice-president of the Staunton Steam Roller Mill Co., Staunton, Va., wants boiler and engine.

Boiler and Engine.—G. W. Cone, Riverton, Va., will want an engine and boiler.

Boiler and Engine.—James McGlynn, Apalachicola, Fla., wants a 15 or 20 horse-power boiler and engine of the semi-portable type.

Brick Machinery.—The Jasper City & Mineral Land Co., Jasper, Tenn., will need brick-making machinery.

Calcing Plant.—C. C. M., care of MANUFACTURERS' RECORD, Baltimore, Md., wants estimates on complete outfit for calcing plaster, including pulverizers and kettles; capacity to be 250 barrels per day.

Canning Factory.—The Jasper City & Mineral Land Co., Jasper, Tenn., will need machinery for a canning factory.

Canning Machinery.—Moore & Rosenberger, Kensington, Ga., want prices on canning factory machinery.

Clock.—The Montgomery Ginning & Cotton Co., Montgomery, Ala., wants a watchman's clock.

Door and Sash Machinery.—The Sanford Sash & Blind Co., Sanford, N. C., wants a good second-hand sticker for doors and sash, one side.

Drag Saw.—W. T. Meers & Co., Waco, Texas, will want a drag saw.

Drill.—T. W. Brasig, Navasota, Texas, will purchase a diamond drill.

Drill.—J. S. Fleming, American Hotel, Richmond, Va., wants a diamond core drill.

Dummy Engines.—The Asheville & Craggy Mountain Railway Co., W. B. Gwyn, president, Asheville, N. C., wants prices on second-hand dummies, not less than 25,000 pounds weight on driving wheels.

Electrical Railroad.—The Hagerstown Street Railway Co., Hagerstown, Md., wants estimates, etc., for the construction of an electrical railroad, including entire equipment.

Electric light Plant.—Swift, Wilcox & Braswell, Elberton, Ga., want to correspond with manufacturers of electric light machinery.

Electric Plant.—The Asheville & Craggy Mountain Railway Co., W. B. Gwyn, president, Asheville, N. C., wants estimates on electric plant (in duplicate) including boiler, etc., capable of generating 125 to 150 horse-power on full strain.

Engine.—Samuel Cook & Son, New Berne, N. C., will need a four horse-power engine.

Excelsior Machinery.—W. T. Meers & Co., Waco, Texas, want prices on excelsior machinery.

Flour Mill.—J. A. Fauver, vice-president of the Staunton Steam Roller Mill Co., Staunton, Va., wants complete outfit for a 200-barrel roller flour mill.

Foundry.—The Jasper City & Mineral Land Co., Jasper, Tenn., will need machinery for an iron foundry.

Furnace.—O. H. Tucker, Quitman, Ark., wants a furnace for heating a building.

Furnace, &c.—E. N. Orkney, Tyler, Texas, wants information on the newest improved iron furnace, rolling mill, &c., for manufacturing into bars and rods 800 lbs. per day from scrap iron.

Furniture Machinery.—The Estillville Planing Mill Co., Estillville, Va., probably wants catalogues and prices of furniture machinery.

Heating Apparatus.—J. H. Windrim, Washington, D. C., will receive proposals until November 29 for all the labor and materials and fixing in place complete low-pressure steam-heating and ventilating apparatus in the courthouse building at Huntsville, Ala.

Heating and Ventilating Apparatus.—James H. Windrim, Washington, D. C., will receive proposals for all the labor, materials and fixing in place low-pressure steam-heating and ventilating apparatus in the postoffice building at Houston, Texas.

Hoisting Machinery.—W. T. Meers & Co., Waco, Texas, want prices on hoisting machinery.

Ice Factory.—The Jasper City & Mineral Land Co., Jasper, Tenn., will need machinery for an ice factory.

Ice Machinery.—The Virginia Ice Co., Radford, Va., will probably want estimates on ice machinery.

Ice Machinery.—J. E. Barwick, Wildwood, Fla., will want a small ice machine.

Ironworking Machinery.—Biddle Bros., Knoxville, Tenn., will want ironworking machinery.

Lathes.—Moore & Rosenberger, Kensington, Ga., want prices on foot-power turning lathes.

Laundry.—The Jasper City & Mineral Land Co., Jasper, Tenn., will need machinery for a laundry.

Laundry Machinery.—David McMullen, Lakeland, Fla., wants a washing machine.

Lime-kiln.—A. R. Strachan, Middlesborough, Ky., wants addresses of manufacturers of the latest improved lime kilns.

Machine Shops.—The Wheeling & Elm Grove Railroad, Wheeling, W. Va., wants one engine lathe 48 inches over swing, one engine lathe 12 inches over swing, one bolt cutter to cut 1 1/2 inch bolt, one 36-inch hydraulic press, one planer 6 feet long 27 inches wide, one shaping machine 12-inch stroke, one upright drill press 20-inch stroke and one small fan, second-hand.

Pipe-cutting Machines.—Biddle Bros., Knoxville, Tenn., will want pipe-cutting machines.

Pipe Machine.—"Pipe Machine," care of MANUFACTURERS' RECORD, wants a new or second hand pipe machine to cut and thread wrought iron standard pipe from 6 to 14 inches.

Planing Mill.—The Tampa Lumber Co., Tampa, Fla., probably wants a planing mill.

Planing Mill.—The Jasper City & Mineral Land Co., Jasper, Tenn., will need machinery for a planing mill.

Pumps.—Biddle Bros., Knoxville, Tenn., will want pumps and supplies.

Rails, Spikes, etc.—The Asheville & Craggy Mountain Railway Co., W. B. Gwyn, president, Asheville, N. C., wants prices on steel T rails of 30 to 40 pounds; also spikes, joints, etc.

Ribbon Looms.—The Hagerstown Manufacturing, Mining & Land Improvement Co., Hagerstown, Md., wants ribbon looms for a silk mill.

Sash, Door and Blind Machinery.—James McGlynn, Apalachicola, Fla., will want sash, door and blind machinery.

Sash Machinery.—The Estillville Planing Mill Co., Estillville, Va., probably wants prices and catalogues of sash machinery.

Sash Relisher.—J. E. Ulander, Waco, Texas, will purchase a sash relisher.

Saw Mill.—The Golden Valley Hydraulic Mining Co., Golden, N. C., wants saw mill machinery.

Saw Mill.—The Tampa Lumber Co., Tampa, Fla., probably wants a band saw mill.

Shaper.—The Enterprise Machine Works, Knoxville, Tenn., wants a shaper.

Shingle Mill.—J. C. Meekins, Columbia, N. C., wants prices on a shingle mill.

Silk-mill Machinery.—The Hagerstown Manufacturing, Mining & Land Improvement Co., Hagerstown, Md., wants machinery for a silk mill.

Supplies.—W. A. Carpenter, president, Carnegie City, Va., wants a full line of supplies for foundry and machine shop.

Telegraph Line.—Frank Matthews, Pineville, Ky., wants bids for the erection of about 200 miles of telegraph line over a rough mountain country.

Water Works.—J. L. Young, Cleveland, Tenn., wants estimates on the cost of complete water works for a city of 5,000 inhabitants.

Wooden Pipe.—N. H. Trask, Fort Payne, Ala., wishes to purchase 3,000 feet 4-inch wooden pipe.

Woodworking Machinery.—T. F. Stonebaker, Fredericksburg, Va., will probably want woodworking machinery.

Woodworking Machinery.—The Golden Valley Hydraulic Mining Co., Golden, N. C., wants woodworking machinery.

Woodworking Machinery.—The Powells River Lumber Co., J. C. Carr, manager, Tazewell, Tenn., will soon want lumber-mill machinery.

Woodworking Machinery.—The Estillville Planing Mill Co., Estillville, Va., wants a moulder, tenoner, band saw, resaw, cut-off saw and other woodworking machinery.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.



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Ice Making, Cold Storage, Packing Houses, Breweries, &amp;c.

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Sole American Manufacturers of

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### Special Designers of Industrial Plants.

Completely Equipped Shops, Foundries, Warehouses, Cotton and Woolen Mills, Grain Elevators, &amp;c.

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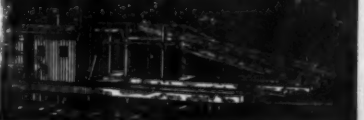
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Extension truss, to drive from one bent to another. 20 feet late at swing, 9 feet from center. Fitted up with our new-style Nasmyth Steam Pile Drivers.

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**COTTON MACHINERY FOR SALE,** made by Bridesburg Manufacturing Co. 4,000 spindles, carding, &c., entirely complete and in very good condition. Will be sold at a great bargain for cash. Address "D. W. O." care Manufacturers' Record, Baltimore, Md.

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FOR SALE.

Picking, Carding, Roving, Spinning, Spooling, Twisting, Reeling, Winding, Weaving and Finishing for Cotton and Woolen Mills. Very large stock to select from in our storehouses here, of over two acres of storage.

### JEREMIAH CLARK,

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### FOR SALE.

At Petersburg, Va., on November 26, 1891, the

### Battersea Cotton Mills Property,

Including buildings, machinery, 13 acres of land, tenement houses, one-half the water-power of the Appomattox river; Norfolk &amp; Western Railway transportation at the door of the mills; location and plant valuable for other industries. For particulars address at Petersburg, Va.,

ALEXANDER DONNAN, Trustees.  
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### FOR SALE AT A SACRIFICE.

### First-Class Water-Power,

Located at Ballston Spa, N. Y., consisting of new dam, steel steam boiler and three acres of land. Address H. E. McKNIGHT, Attorney, Ballston Spa, N. Y., or CHARLES WHITING, Albuquerque, N. M.

### FOR SALE.

One 40 to 50 Horse-Power Second-Hand BALL ENGINE. Good as new.

One 40 to 50 Horse-Power Second-Hand HARRISON'S SAFETY BOILER.

Will be sold at great bargain. We sell to put in more power.

MARION COTTON MILLS,

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**CORRESPONDENCE SOLICITED WITH**  
FIR-T-CLASS MACHINIST who has some money to invest in Machine Shops, principally for repair work. Principal part of capital stock will be taken here. BREM & CO., Charlotte, N.C.

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### New or Second-Hand PIPE MACHINE,

To cut and thread Wrought-Iron Standard Pipe from 6 in. to 14 in. Address

"PIPE MACHINE,"

care Manufacturers' Record, Baltimore, Md.

### PROPOSALS.

**SEALED PROPOSALS** will be received by the West End Hotel & Land Company of Winston until 12 M. December 1st, 1890, for the erection of a large frame hotel, 410 feet front, 60 feet deep, with 100 feet L., four stories high. Plans and specifications may be seen at the office of the Company at Winston, N. C., or at the office of the architects, Messrs. Wheelwright & Haven, 6 Beacon street, Boston, Mass. Each proposal must be accompanied by a certified check in the sum of \$5,000, payable to order of James A. Gray, cashier, conditioned upon the execution of a contract to erect the hotel in accordance with the plans, specifications, etc. When contract is made a good and sufficient bond in the sum of \$5,000 will be required, conditioned upon the faithful execution of the terms of the contract. Hotel to be completed by October 1st, 1891. Date for opening bids postponed until December 1st at request of bidders. For further particulars apply to F. M. WILSON, Secy., Winston, N. C.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 3d day of December, 1890, for furnishing all labor and materials required for the erection and completion (except heating apparatus and approaches) of the U. S. Courthouse and Postoffice building at Helena, Ark., in accordance with the drawings and specification, copies of which may be had on application to this office or at the office of the Superintendent at Helena, Ark. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time herein stated for opening the same, also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in an envelope, sealed and marked "Proposal for the Erection and Completion of the U. S. Courthouse and Postoffice building at Helena, Ark.," and addressed to JAS. H. WINDRIM, Supervising Architect. November 3th, 1890.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 4th day of December, 1890, for all the labor and material required for the excavation, concrete foundations, stone and brick work of the basement and area walls, first floor iron beams and girders and columns in basement for the U. S. Courthouse, Postoffice and Customhouse building at Bay City, Mich., in accordance with the drawings and specification, copies of which may be had at this office or the office of the superintendent at Bay City, Mich. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time herein stated for opening the same, also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in envelopes sealed and marked "Proposal for the Excavation, Concrete Foundations, Stone and Brick Work and Iron Work for the Basement and Area Walls for the U. S. Courthouse, Postoffice and Customhouse at Bay City, Mich.," and addressed to JAS. H. WINDRIM, Supervising Architect. November 6th, 1890.

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With Buildings and Steam-Power.

The Charleston, S. C., Electric Light Company, being about to build new works on Concord street, offer for sale their present LAND, BUILDINGS AND STEAM PLANT in Hayne and Pinckney streets. Property will be sold with the entire Steam Plant of 35 horse-power or with only 100 horse-power of Steam Plant, as purchaser may prefer.

Charleston, S. C., is one of the best locations for manufacturing enterprises in the South, having good freight facilities, both rail and ocean, lovely climate, cheap living and good and cheap labor. Apply to

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### 7 Horse-Power

## Otto GAS Engine

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**BOILERS, ENGINES,  
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24-in. 6-Roll Single Surface Planer & Moulder \$275  
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Colburn 2-Spindle Blindstole Boring Machine 35  
Band Saw, 48-inch wheels, iron table, 35  
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6x6 Vertical Engine, 8 ft. bed, 18 in. swing, 100  
35 h. p. Portable Boiler, 200  
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## Complete Saw Mill Equipment.

1 Erie Machine Works Engine, 18-in. stroke, 14x18 in. cylinder; balance wheels and all other attachments complete.  
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All in good condition and in complete running order.

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Have on hand for sale all kinds of SECOND HAND ROLLING STOCK.

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1 20-in. swing Engine Lathe, 14-ft. bed.  
1 14-in. swing Engine Lathe, 7-ft. bed.  
1 15-in. Crank Shaper.  
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1 Water Grinder.  
1 28 in. x 28 in. x 7 ft. Planer.

All the above are NEW and will be sold at a BARGAIN. Write for our complete catalogue.

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## Second-Hand Machinery Cheap.

1 8-H.P. Portable Engine and Boiler, on wheels.  
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1 No. 1 Universal Grinding Machine. B. & S.  
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1 Set 10 in. x 6 ft. Power Bending Rolls.  
1 Trip Hammer.  
1 No. 7 Root Blower. 1 No. 3 Sturtevant Exhaust.  
1 No. 3 Universal Mill. Brainard.  
1 No. 2 Lincoln Pattern Miller.  
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1 Horizontal Drilling Machine.  
1 Set 12 in. x 10 ft. Power Bending Rolls.  
Write us for what you want and send description of Machinery that you wish to trade or sell.

**THE J. A. MACKINNON MACHINERY CO.**  
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## SECOND-HAND MACHINERY.

1 Iron Pl., planes 8 ft. long, 38 in. x 36 in., 2 hds. Sellers.  
1 " " 7 ft. " 30 in. x 30 in.  
1 " " 8 ft. " 30 in. x 30 in.  
1 Engine Lathe, 20-ft. bed, 72-in. swing. Good.  
1 Engine Lathe, 16-ft. bed, 60-in. swing.  
1 Engine Lathe, 10-ft. bed, 20-in. swing. Good.  
1 Automatic Gap Lathe, 8-ft. bed, 48-in. swing.  
2 Engine Lathes, 8 ft. bed, 18 in. swing.  
1 Engine Lathe, 8 feet bed, 15 inch swing.  
1 " " 6 " " 18 " chuck.  
and various other sizes.  
1 Small Turret Head Lathe.  
1 24-in. B. G. S. F. Blaisdell Drill. Good.  
1 20 inch Plain Drilling Machine.  
1 Betts 50-in. Horizontal Boring Mill.  
1 6 1/2 in. Slotter, automatic feed.  
1 40-lb. Bradley Cushioned Hammer.  
1 Small Power Press.

Send for list Second-hand tools.

**NEW YORK MACHINERY DEPOT,**  
Brooklyn Bridge Store, 16, New York.

## BARGAINS.—Second-Hand Machinery. Good Condition.

**L. F. SEYFERT'S SONS,**

Nos. 437, 439, 441 N. Third St., Philadelphia, Pa.

1 180 h.p. Corliss Hor. Engine, cyl. 20x48 in.  
1 100 h.p. Horiz. Engine, cyl. 18x36 in. Rickards.  
1 75 h.p. Horiz. Engine, cyl. 16x24 in. Rickards.  
1 40 h.p. Vertical Engine, cyl. 12x14 in. Taylor.  
1 25 h.p. Lidgerwood Hoisting Eng., cyl. 10x12 in.  
1 6, 8, 10, 15 & 20 h.p. Portable Horiz. Eng., single & double cyl. & drum. Combined & single.  
1 15 h.p. Geiser Traction Eng. & Boiler on wheels.  
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1 each Planer, 24 in. x 24 in. x 3 and 8 ft.  
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1 Planer, 40 in. x 40 in. x 14 ft.  
1 Planer, 42 in. x 42 in. x 10 and 12 ft.  
1 Planer, 22 in. x 20 in. x 4 and 5 ft.  
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## TRADE NOTES.

The fire which destroyed the factory of the D. F. Morgan Boiler Co., Akron, Ohio, on November 2 will but slightly inconvenience the many customers of that company. With its accustomed push and enterprise it has arranged for rebuilding immediately, and by November 25 will be in operation again. The new factory is planned on a larger scale with increased facilities and improved methods. Tools, machinery and all necessary supplies have been ordered to be on the ground ready for operation as soon as the building is under roof. A large number of castings are being accumulated from the foundry and every effort put forth for the resumption of work as soon as possible. This concern is the manufacturer of the celebrated Morgan steam and hot-water heating apparatus, and its patrons, learning with regret the misfortune that overcame it at this busy period, will no doubt practice a little patience, especially in view of the fact that the company promises that the new factory will be in a much better condition for turning out superior work at short notice.

The following notice has been sent out to the patrons and customers of the well known saw manufacturers, Emerson, Smith & Co., Limited, Beaver Falls, Pa.:

"We desire to inform our friends and customers that our workmen are on a strike. On the 16th of July they presented a paper to us, signed by what purported to be the shop committee of the Federation of Labor, demanding the discharge of a faithful workman, who has been with us for 16 years, for the reason that he declined to join their union. Our answer was in substance, that we would only discharge for incompetency, insubordination, or when in our opinion the state of trade was such as to justify reducing our force; that we had no objections whatever to anything in the way of a labor union, but that every man had the right to become a member or not, as suited himself. On the morning of July 17 this committee again called on us, and stated that they had concluded to quit their work unless this man was immediately discharged. We positively declined, and our workmen struck. We issue this statement to explain any delay in filling orders. We can give no probable date at which we will resume in full, and while our factory is in operation, it is with a broken force, and it would be unwise for us to promise expedition. We expect to succeed in our efforts to manage this factory, and in the meantime ask for your patience and forbearance.

EMERSON, SMITH & CO., Limited.  
BEAVER FALLS, PA., July 23, 1890."

"The above was issued on July 23d, and we are pleased to be able to say at this date (October 17th) that we have succeeded in our efforts to manage our factory, and that we have a full force of new men at work. There has been a great deal of disturbance and considerable rioting. We have had to make a camp out of our factory, and feed, board and sleep our men inside of it, but "all is well that ends well," and we are now ready for an increased business at the old stand.

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A reliable fire extinguisher is an important adjunct to the equipment of a building, whether it be a factory, business house, public building or residence. The liability of a fire to break out at the most unexpected moment makes it prudent to provide suitable apparatus for quelling it immediately without allowing a foothold by awaiting the arrival of the fire department. It is known that many of the large fires which seem to occur periodically, and are

so destructive to life and property, could have been easily extinguished at the start had serviceable means been convenient. The failure to provide such means is not only imprudent, but appears criminal negligence, especially in the case where a number of hands are employed. The two cuts on this page illustrate the fire extinguisher made by the Black Cloud Chemical Fire Extinguisher Co., of Cleveland,



FIG. 1.

Ohio. It is 17 inches in height and 5 inches in diameter, and the handle is used in place of a hose, as the stream is directed by the same. The cylinder is made of steel plate, lined inside with copper and block tin, and is riveted with copper rivets every inch. The machine is operated by turning the faucet and raising the rod, when the tube revolves, mixing the two chemicals, and it is in operation, throwing a stream 45 feet in length. The superior

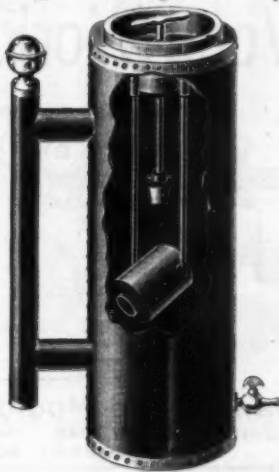


FIG. 2.

points advanced for this extinguisher are simplicity of action, durability, is non-explosive, will not injure flesh or fabric, carries no pressure until required, will not freeze at 35 degrees below zero, does not lose its strength in any climate, will extinguish over 2,000 cubic feet of flames, is light to handle, weighing 22 pounds when charged, and can be recharged for the nominal sum of ten cents.

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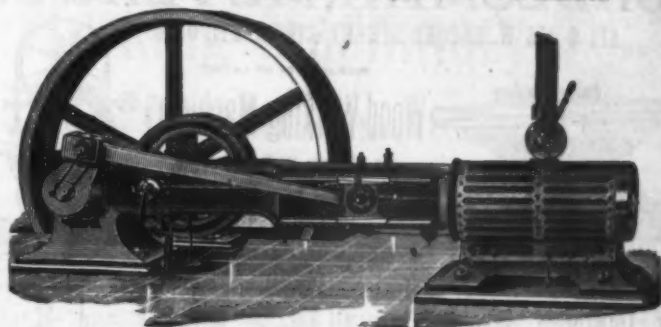
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33 inch.....\$7.75 34 inch.....\$8.00

35 inch.....\$8.25 36 inch.....\$8.50

37 inch.....\$8.75 38 inch.....\$9.00

39 inch.....\$9.25 40 inch.....\$9.50

41 inch.....\$9.75 42 inch.....\$10.00

43 inch.....\$10.25 44 inch.....\$10.50

45 inch.....\$10.75 46 inch.....\$11.00

47 inch.....\$11.25 48 inch.....\$11.50

49 inch.....\$11.75 50 inch.....\$12.00

51 inch.....\$12.25 52 inch.....\$12.50

53 inch.....\$12.75 54 inch.....\$13.00

55 inch.....\$13.25 56 inch.....\$13.50

57 inch.....\$13.75 58 inch.....\$14.00

59 inch.....\$14.25 60 inch.....\$14.50

61 inch.....\$14.75 62 inch.....\$15.00

63 inch.....\$15.25 64 inch.....\$15.50

65 inch.....\$15.75 66 inch.....\$16.00

67 inch.....\$16.25 68 inch.....\$16.50

69 inch.....\$16.75 70 inch.....\$17.00

71 inch.....\$17.25 72 inch.....\$17.50

73 inch.....\$17.75 74 inch.....\$18.00

75 inch.....\$18.25 76 inch.....\$18.50

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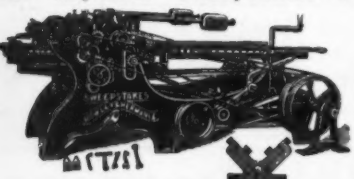
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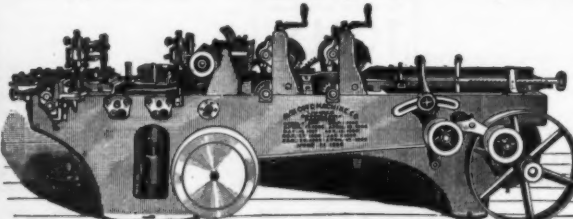
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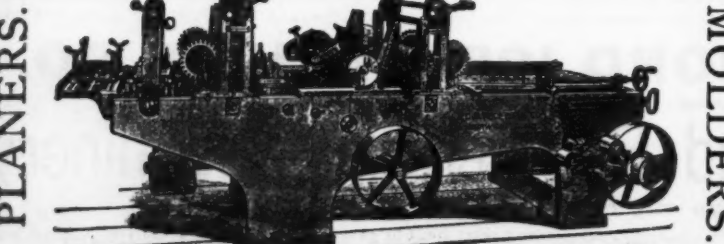
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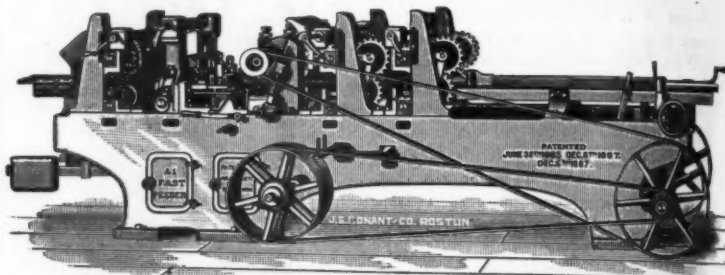
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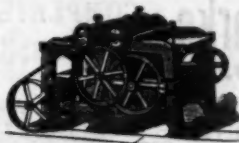
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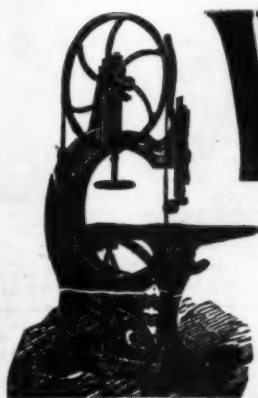
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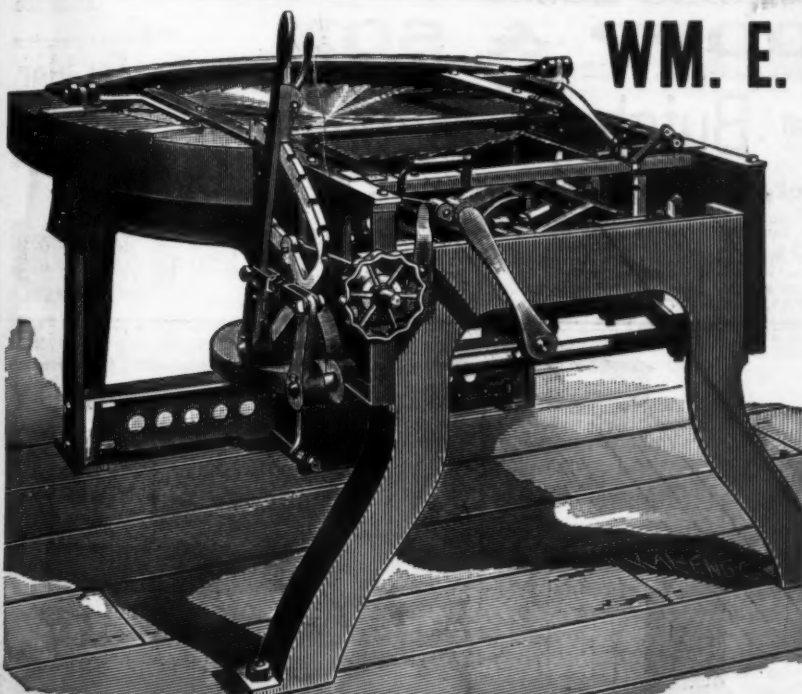
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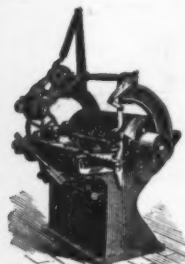
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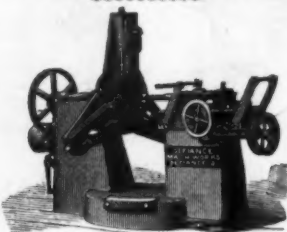
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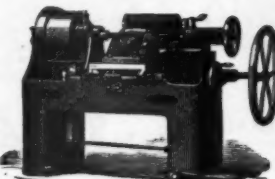
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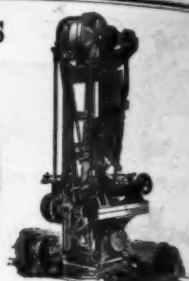
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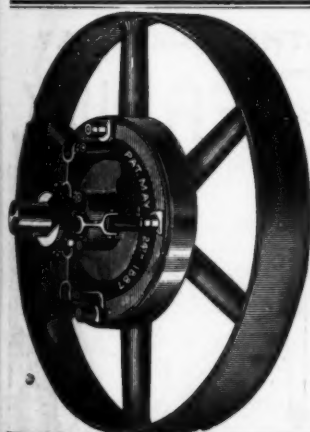
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We are sole makers of hardwood bent rim, oak spoke arm Pulleys: gripped to shaft with bolts, and using patent paper bushings. They can be put onto shaft without taking it down or cutting keyseats. No glue or nails used in their construction. Hub with bushing fits any size of shaft.

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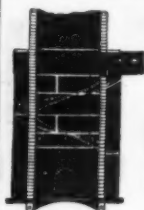
## TRADE NOTES.

A LARGE and increasing trade has compelled the Hughes Steam Pump Co., of Cleveland, Ohio, to build new shops fitted with the latest conveniences and designed especially for the manufacture of steam pumping machinery from the smallest to large water works engines for cities and towns. The company has added many new tools to its already great variety, and is in position to place its product on the market with promptness and accuracy.

THE lease and fixtures of the "Hotel Glyndon," of Richmond, Ky., is offered for sale by J. B. Willis of that city. It is a four-story structure, pressed brick with stone trimmings, Queen Anne style, and was completed 12 months ago. The house is fitted up on an elaborate scale, and is the only first-class hotel in the town. The increasing demand for hotel accommodations, resulting from the great influx of men and money in the South, places judiciously-made investments in these properties at a premium.

GRAPHITE PAINT FOR IRON STRUCTURES. An elevated railroad structure over one mile long and four tracks wide is being erected at Jersey City, N. J., by the Pennsylvania Railroad Co., on which their entire passenger travel of millions of people will enter and leave the city. The iron work, which is 13 feet above the street, is of immense proportions, and was made and erected by the Pencoyd Iron Works. The custom of the railroad company has been heretofore to use a light-colored paint on all of their iron structures, but after a thorough examination into the merits of Dixon's silica-graphite paint they chose that as the paint for this work. The work of painting is rapidly progressing, and Mr. Eckert, the superintendent of painting, states that while he was at first very much opposed to the use of graphite paint, he now finds it is easily laid on, with a covering power twice that of white lead and three times that of other mineral paints, and of very handsome color. The claim is advanced by the Joseph Dixon Crucible Co., of Jersey City, N. J., which manufactures this graphite paint, that it will successfully resist all chemical and atmospheric changes, and possesses great lasting power. It is not a new article, but has been on the market for 20 years, and there are said to be tin roofs in Trenton, N. J., that have been coated with it for 15 years without repainting.

REIHLE BROS., proprietors of the Philadelphia Scale & Testing Machine Works, report a large and varied sale of their machines, covering a wide expanse of territory. The firm is receiving the endorsement of a widely-distributed Southern trade, and among the recent orders to be filled for that section are noted four extra heavy overhead charging scales for J. P. Witherow, engineer for Southern furnaces; one 80-ton iron frame railroad track scale, U. S. navy-yard, Norfolk, Va.; one overhead charging scale, Southern Iron Co., Tenn.; one extra heavy charging scale, Tennessee Coal & Iron Co., South Pittsburg, Tenn.; one 60-ton railroad track scale, Southern Railway Supply Co., Richmond, Va.; one 40,000-lb. testing machine, Bureau of Steam Vessels, Norfolk, Va.; one power rope-twister, Anniston Pipe Works, Anniston, Ala.; one power rope-twister, Chattanooga Pipe & Foundry Co., Chattanooga, Tenn.; one 20-ton Robie jack, East End Land Co., South Boston, Va.; one 10-ton Robie jack, Cochran Ore Co., Hamlet, Ga.; ten 30-ton Robie jacks, Norfolk & Western Railroad; one 30 and two 10 ton Robie jacks, U. S. navy-yard, Norfolk, Va.; and two 30-ton Robie jacks, Richmond & Danville Railroad, Richmond, Va. The works are very busy, and have orders for several months ahead.



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PATENT  
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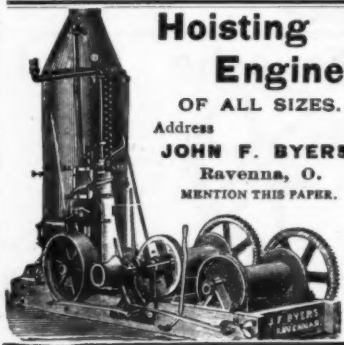
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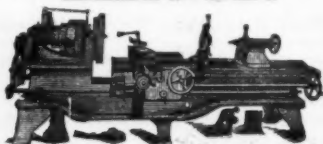


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Don't pay your watchman to sleep all night.  
Control him by a Watchman's Clock.

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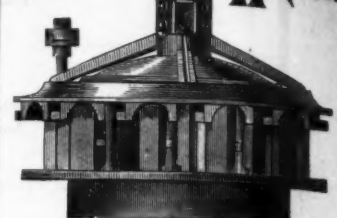
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✻ *The Residence Portion, Notable for Beauty of Situation, has been Platted to Secure the Best Effects.* ✻

**N**O EXPENSE will be spared by the Company in developing all this property. A standard gauge railroad, connecting with every railroad entering Durham, will pass through the center of the land designed for industries. A dummy line, under construction, will connect all the outlying lots with the center.

A Cotton Factory to employ 150 hands is to be built at once; also a Flour and Meal Mill with a capacity of 200 barrels a day.

The Company has no stock for sale. It will offer only alternate lots, reserving others for enhancement in value by development.

Enterprises of merit will be aided by donations of sites and subscriptions to capital stock.

Some of the industries already planned are:

A Knitting Factory,	Woodworking Factory,
Furniture Factory,	Bucket and Barrel Factory,
Chair Factory,	Sash, Door, Blind and Finishings Factory,
Wagon Factory,	Spoke and Handle Factory,
Buggy Factory,	Foundry and Machine Shops,
Refrigerator Factory,	Brick Works,
	Brown Stone Quarry.

In 1856 Durham was named.

Population 1865, 90 persons.

Population 1890, 8,000 persons.

In 1871 the first tobacco warehouse for the sale of leaf tobacco was established.

In 1890 it has the four largest in the United States.

Taxable Values, 1890, \$6,293,398.

Rate of taxation, city or county, 1 per cent.

In 1869 it had 6 manufactories, capital \$25,000.

In 1890 it has 23 manufactories, capital \$2,000,000; number of employees 200.

Wages paid, 1890, \$750,000; advertising, 1890, \$100,000; paid revenue tax one year, \$827,269.54.

Durham has three Banks—capital, \$400,000.

Surplus, 40,000.

Deposits, July 1st, 1890, 623,000.

It has two daily and one weekly newspaper.

## DURHAM HAS

WATER WORKS,

ELECTRIC-LIGHT PLANT,

TELEPHONE SYSTEM,

STREET CAR LINE,

FIRE DEPARTMENT,

TEN CHURCHES (for whites),

SCHOOLS,

TRINITY M. E. COLLEGE.

Situated in the center of Golden Belt of North Carolina, comprising counties of Durham, Orange, Person, Caswell, Alamance, Chatham, Wake and Granville.

110 miles from Lynchburg.

160 miles from Richmond.

175 miles from Norfolk.

26 miles from Raleigh.

50 miles from Sanford.

135 miles from Charlotte.

55 miles from Greensboro.

## DURHAM'S RAILROADS:

RICHMOND & DANVILLE SYSTEM.

DURHAM & KEYSVILLE, giving close Richmond Connection.

DURHAM & NORTHERN to Henderson, connecting with Seaboard Air Line.

LYNCHBURG & DURHAM, crossing Atlantic & Danville, Richmond & Danville, Norfolk & Western, Chesapeake & Ohio.

L. & D., to be extended to Fayetteville and junction there with Cape Fear & Yadkin Valley.

Extension of WILMINGTON & WELDEN SYSTEM, already ordered by that company from Stanhope, N. C., to Durham.

Manufacturers Desiring a Location where all the Conditions of Cheap Materials, Climate and Railroad Facilities can be had in a Well-Established, Well-Advertised, Prosperous Community, Should Address

**R. H. WRIGHT, Secretary and Treasurer,**

**DURHAM, N. C.**



## The Goshen Land & Improvement Company

OF GOSHEN, VIRGINIA.

---

Goshen, the Gateway connecting the Virginias.

The Coming Railroad Center.

Goshen fulfilling prophecy in becoming the Great Iron Manufacturing Center.

Surrounded by the wonderful Mineral Springs Belt, where thousands from all over the land congregate during the Summer.

Great Industries located here;

More to follow

Car Works, to manufacture Passenger, Freight and Electric Cars, are now being built.

Works covering 15 acres of ground.

Large Rolling Mill under construction.

Keystone Machine Company's building nearly completed.

Woodcock Iron Works building now under construction.

The Palace Hotel, the finest building in Virginia, under contract to be completed

July 1st, 1891.

Industries already secured and under construction guarantees the success of Goshen as a Manufacturing Center.

# LAWRENCEBURG, TENN.

The Coming Residence and Industrial City of the Great  
Western Mineral Belt of Tennessee.

THE LAWRENCEBURG LAND & MINERAL COMPANY, with a capital of \$1,300,000, started a few weeks ago as a  
"Chicago enterprise," but has already assumed national proportions. Eighty miles South of  
Nashville and fifty miles North of Florence.

## Semi-Annual Sale

## November 18 and 19.

*RESIDENCE LOTS, BUSINESS LOTS, FARM TRACTS, FRUIT and  
TRUCK PATCHES, TIMBER TRACTS of from 200 to 2,000 Acres each.*

TO THE HIGHEST BIDDER.

LAWRENCEBURG possesses the following unequalled natural advantages:  
Brown hematite iron ore of the highest grade of excellence and in  
inexhaustible supply.  
More than 1,250,000 acres of the finest hardwood timber.  
Equable climate, delightful both in winter and summer.  
Altitude of 1,200 feet above tide-water, insuring healthfulness. Malaria is unknown.  
Water supply, for drinking the best in the world, and several thousand horse-power  
for manufacturing purposes right at the town.  
Good farming and grazing lands on all sides.  
As good fruit-growing section as there is in the country.  
Best of building material—limestone, building stone, brick clay, etc.

Beautiful town-site, several hundred acres covered with ornamental trees; 10,000  
city lots.  
Manganese in great quantities has been discovered within the past few weeks.  
Best of coal within 80 miles on the east or south.  
Proximity of favorable conditions for manufacturing to great cotton fields.  
Although our enterprise is new we have in successful operation two cotton mills,  
three newspapers, cotton gins, bank, planing mill, two hotels, several saw mills, normal  
seminary, flouring mill, immense brick factory, several large iron and woolworking  
establishments already contracted for, a new blast furnace nearby, and another building.  
Good church and school facilities.  
The most equitable plan ever offered the public. Lawrenceburg will be a city,  
sure.

FOR PROSPECTUS AND BY-LAWS ADDRESS

## Lawrenceburg Land & Mineral Company,

Or at Lawrenceburg, Tenn.

Room 63, 185 Dearborn Street, Chicago, Ill.

WILLIAMS, PEASE & BAXTER,

Real Estate Agents and Auctioneers,

Nashville, Tenn.

For Transportation Rates address PAULSEN & SPARRE, Bankers,  
58 La Salle St., Chicago, Transportation Agents for the Company.



# Six Trunk Line Railroads at BESSEMER

In the heart of Mineral Alabama, encircled with hills of Coal, Iron and Limestone Rock.

"The South is the coming El Dorado of American adventure. May the Almighty speed and guide her onward progress!" So wrote the Hon. W. D. Kelley, M. C., of Pennsylvania, a few months ago, and every day brings forth new evidence to prove the correctness of his prediction and to show that without a doubt the South is to be the richest country upon the globe. In climate, soil, mineral and timber wealth, in rivers large and small, in a long seacoast, in abundant rainfall, in healthfulness and in every other advantage that could be asked nature seems to have done her best for this favored land. The wealth in iron and coal is beyond estimate. Of timber there is an unlimited supply, including nearly every variety of hardwoods for woodworking purposes.

WHERE  
MONEY  
WILL  
GROW!

Seven Furnaces, output 1890, 250,000 tons; Rolling Mill, 100 tons daily; Fire Brick Works, 25,000 daily; Many Lesser Industries

Offers Thirty Varieties of Hardwoods for Woodworking Industries.

11,000 City Lots For Sale.

The Bessemer Land & Improvement Co.

this new year, are prepared to deal liberally for the founding of Iron and Woodworking industries in this growing Mining and Manufacturing Center.

H. F. DeBARDELEBEN, Prest.  
H. M. McNUTT, Secretary.

## EDMONDS & ROBINSON,

In the development of its agricultural, mineral and timber resources; in its general upbuilding and advancement, Texas is making more rapid progress than any other State in the Union. Its population is increasing at a stupendous rate. Millions of dollars from the West and Northwest, from the New England States and from England are pouring into the State for investment in factories, mills, railroads and commercial enterprises.

San Antonio is the commercial and financial center of the great South and Southwest Texas. It is a city of 55,000 population, is the center of the most important railroads in the State, has four national and five private banks, building and loan associations, a large number of industrial establishments and some of the largest jobbing houses in the Southwestern States.

### LAWYERS

AND DEALERS IN

## REAL ESTATE

In the matter of homes it is the handsomest city in America.

In twelve years it has grown from 20,000 to 55,000.

It is growing more rapidly now than at any former period.

Property in and around San Antonio and throughout Southwest Texas is increasing in value every day. It will never again be as cheap as it is now.

There is no place in the world offering greater inducements for the purchase of real estate, either for investment or speculation, with assurance of such large and certain profits.

SAN ANTONIO,  
TEXAS.

## Iron! Cotton! Leather!

Goods made at the point both of production of the raw material and consumption of the manufactured article, with cost of making comparatively low, must return best profits.

## BLUFFTON

At the "IRON BLUFFS," Northern Alabama,

surrounded by furnaces making the best of foundry and car wheel iron; in a county producing 10,000 bales of cotton; with large tanneries nearby, and with the great unoccupied market of the South and Southwest at its door, offers the above advantages to investors in manufacturing industries, and will give liberal subsidies of land to support the stock of companies located there.

LIBERAL AID TO SMALL INDUSTRIES.

Address BLUFFTON LAND, ORE & FURNACE CO., Bluffton, Ala.

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**REAL ESTATE,**  
TREDEGAR, ALA.

Information cheerfully given relative to the proposed improvements to be made in Tredegar, Ala., a town with accomplished realities and not possibilities only. I can offer some property during the summer months at a minimum figure, when considering the certain enhancement of values that is sure to follow. A steel plant, giving employment to 3,000 hands, is assured. This plant alone, when taken with the present established population of 2,500, represents a city in excess of 10,000 souls. Other industries of equal importance are guaranteed in additional. Address

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A. GATLIFF, Vice-Prest.

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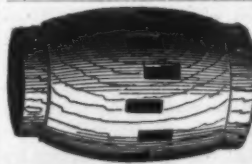
Organize Companies to handle Mineral and Timber Lands.

Report upon Costs of Mine Equipments, including Tramways and Railways. Maps and Profiles Furnished. Reports upon Value of Lands and Abstracts of Titles Furnished.

Act as Agents for Local and Non-resident Property-holders to Collect Rents and Sell Property.

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List your property with us.



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MANUFACTURER OF

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OLEAN, N. Y., U. S. A.

These Hubs are made in sizes from 6x8 to 16x18 inches, and are especially adapted to dry climates.

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MANUFACTURERS OF

**METAL WHEELS,**

For Agricultural Implements,

Trucks, Wheelbarrows, &c.

Look Carefully through this paper and you may find an advertisement of some machinery or other goods that you are in need of. Preserve this copy for future reference

### Progress of the Gas Engine.

What is spoken of as a new development in the manufacture of large gas engines is mentioned in an English paper in alluding to the manufacture of large gas engines by Messrs. Crooley Bros., of Manchester, England. The last size brought out by this firm is an engine of 100 horse-power, of

matically; the gas valve, however, being under control of a governor regulating the fuel in proportion to the work in the usual manner. The gear shaft is driven by spiral gears run in oil, admitting of high speed without causing noise or excessive friction. For electric-light work the power is generally taken from fly-wheel rim, made wide enough to carry the belt, and special

The device is free from mechanism and trap-work, it being more simple than even a hand-clamp.

The indicator is a metallic band, spaced off in inches and sixteenths, and as it passes over the front band wheel, an indicator gives the exact distance from knife to back gauge. This is a new and valuable attachment, and is used in many different

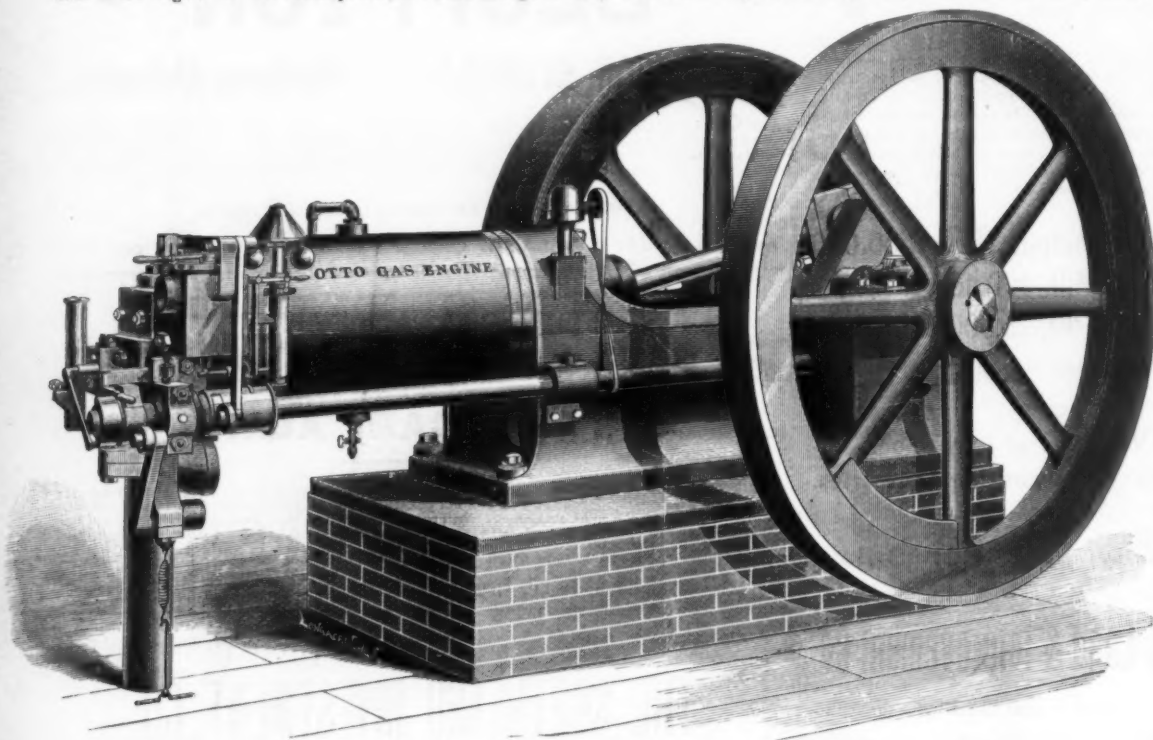
the knife and three in front; jog the paper up to gauge only once, make the cut, then bring forward by indicator three inches more and continue till all is cut. This saves continually joggling up the paper; saves marking it. The gauge is moved so easily and rapidly, it is often found practical to let the knife have a continuous motion, which, as will be seen, the self clamping alone admits of, and is found practical where narrow strips are cut.

Another valuable feature of the Acme is the narrow clamp. The bottom of clamp is made in two parts, the regular width being  $2\frac{1}{2}$  inches. Half of it can be taken off for narrow work, which permits the back gauge to be adjusted to  $1\frac{1}{4}$  inches of the knife.

The steam fixtures are simple, reliable and strong. The operation of the machine is automatically suspended after the cut is made; or, by simply releasing one nut, the machine can have a continuous motion, which is frequently done with long runs of gauged work, or in trimming pamphlets, two operators working at the machine, cutting two piles at once. An instance is shown where one operator, by actual time, trimmed the three sides of pamphlets at the rate of 3,000 piles per day of ten hours. It is so well balanced, it can be instantly stopped at any time or place, and backed out of a cut if necessary, without disturbing the fixtures—a great advantage where there is a doubt about the correctness of the cut, or in removing and putting in the knife.

There are 40 sizes and styles of these machines manufactured, all of which are made interchangeable, so that duplicate parts can be obtained. The shafts are made of steel, and on large machines cut gears are used. C. C. Child, manufacturer, 64 Federal street, Boston, Mass., will furnish further information on application.

THE Ingersoll-Sergeant Rock Drill Co., of New York, N. Y., continues to receive



THE OTTO GAS ENGINE.

horizontal design and embodying all the latest improvements. It is intended for the Wandsworth Projectile Co., of London. The firm has now in hand several large installations requiring from 100 to 500 horse-power in each case, and one of them will be intended to drive a large flannel manufactory. The use of gas engines for this work is a new departure, for it has hitherto been supposed that these engines could not be made powerful enough for driving machinery on a large scale. With these engines is furnished a patent economic producer gas system which, it is stated, in conjunction with the engine, brings down the fuel consumption to less than  $1\frac{1}{2}$  pounds of coal per indicated horse-power per hour.

In connection with this it is interesting to note the progress made by the Otto Gas Engine Works, of Philadelphia, Pa., in the building of the larger sizes of gas engines. A 100 horse-power engine built at these works was furnished the Rockville Gas & Electric Light Co., and is now at work in company with two similar engines of 40 horse-power each, the total capacity of the electric-light station wherein these engines are used being 180 horse-power. At the Philadelphia shops there is in course of construction six other engines of 100 to 120 horse-power each. Three of these are for the Danbury & Bethel Gas & Electric Light Co., to drive their electric-light station of some 3,000 incandescent lamps, and in this the same economic producer gas system referred to as in use in England is to be used. The other engines will also be used in connection with producer gas, and will be erected in cable road and electric road stations, where the use of economical power is of prime importance for the financial success of the undertaking. We herewith illustrate one of the larger types of gas engines, which is built according to the most modern practice. The ignition of the charge is effected by incandescent tube or by the electric spark, according to the kind of gas used in the engine, and the admission of the charge is by ordinary poppet valves working auto-

engines are made running at high speed, in case it is desired to drive dynamos direct without use of countershaft. At these works in Philadelphia there are now some 25 different styles and varieties of engines made and offered, being vertical or horizontal, with different methods of ignition, for slow or high speed, combinations of engines and pumps, dynamos, fans, etc., using producer gas, coal gas, gasoline or natural gas, and ranging in size from  $\frac{1}{2}$  to 100 horse-power. It is estimated that from 100 to 500 Otto engines are in daily use in most of the leading cities of the United States.

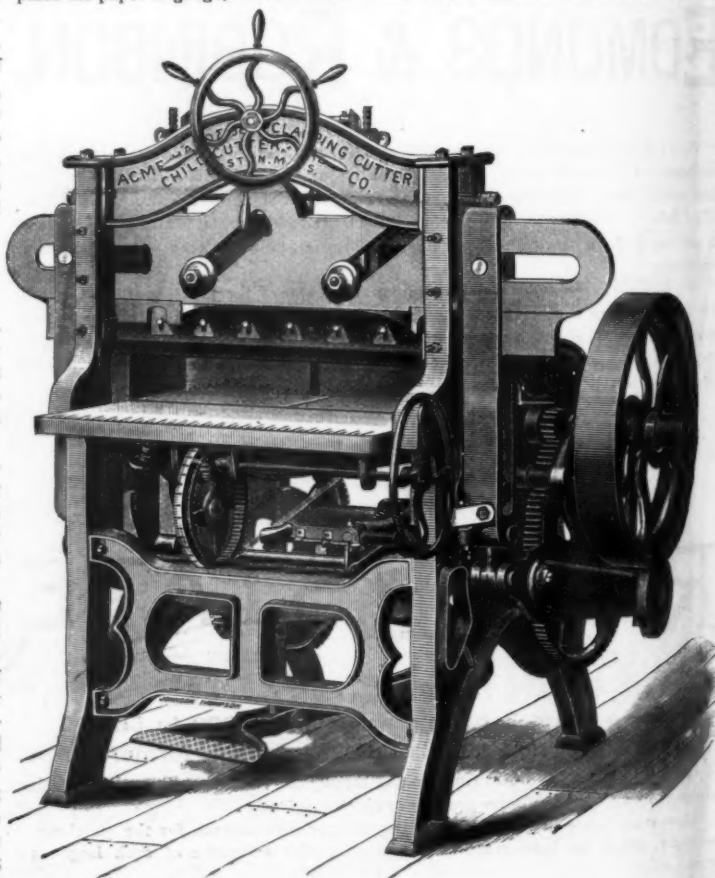
### The Acme Cutter.

A distinct feature of the Acme cutter, which is illustrated on this page, is the automatic self-clamping arrangement. It is a device for which is claimed the important quality of saving both labor and time.

There are three separate principles involved: First, resistance to knife's taking a lateral motion; second, resistance to the knife's cutting; third, the supplementary feature of friction, which is used only in exceptional cases.

To get the self-clamping, the Acme utilizes a power which is generally wasted by making the clamp act as a fulcrum to give the knife the end motion, instead of swinging arms attached to the frames, or slots made in the frames. Whatever resistance there is to the knife's taking a lateral motion makes it bear just so much harder on the point that is giving it lateral motion; and the clamp being that point (on the Acme), it gives a harder pressure the more it cuts, just in the proportion that is needed; for the harder the cut the more resistance, and the more resistance the more clamp. Making use of the power above mentioned, it does not add to the draft of the machine, and is a clear gain and saving of power, and each pile of paper cut gets a clamp just in proportion to its size. "The harder it cuts the more it clamps;" the duller the knife the more resistance and more clamp,

ways, which save time and figuring. To best explain the value of the indicator, take, for example, flat paper 19x24, to be cut in halves. Set the indicator to 12 inches, place the paper to gauge, start the machine



THE ACME CUTTER.

and the work is done, without folding or marking paper; without bringing clamp to mark, and also without clamping or unclamping the paper. Supposing paper 24 inches to be cut into 3-inch strips: Set the indicator to 21; that gives 21 inches behind

orders for mining machinery for foreign countries. The company reports just receiving a second order for a plant of submarine drilling machinery for removing the Iron Gate of the Danube river, Austria-Hungary.

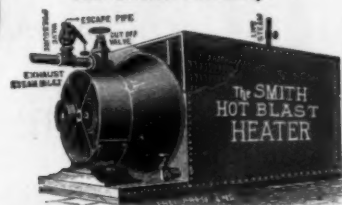
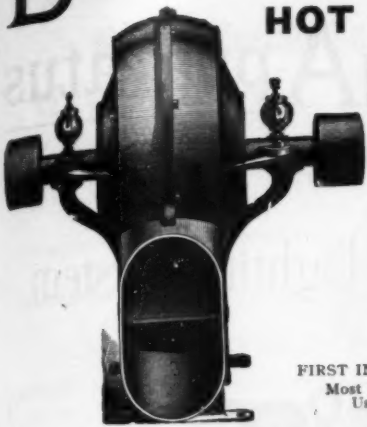


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FIRST IN THE FIELD, BUT LATEST IN DESIGN.  
Most Economical of Power. Fully Guaranteed.  
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Salem Foundry & Machine Shop

—SALEM, MASS.—

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—AUTOMATIC HATCH DOORS, AUTOMATIC LOCK GATES.—

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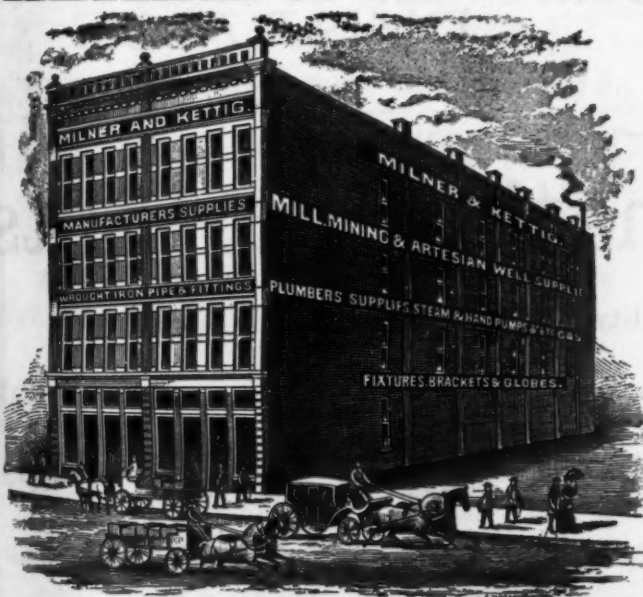
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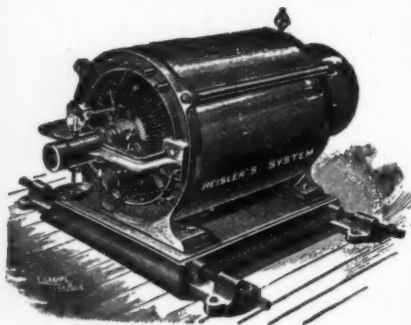
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Plant may be located where power can be secured cheapest, even if miles distant from the lighting. Safety, Reliability, and Financial Success fully demonstrated. Plan of Wiring the Simplest, Cheapest and most Efficient. Strictly Series. Noted for the Brilliance and Beauty of the Light. Lamps, 10 to 100 Candle Power; Long Life without Blackening. Dynamo Self-contained and perfectly Automatic.

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16 Fifth Street, S. E.

WASHINGTON, D. C.

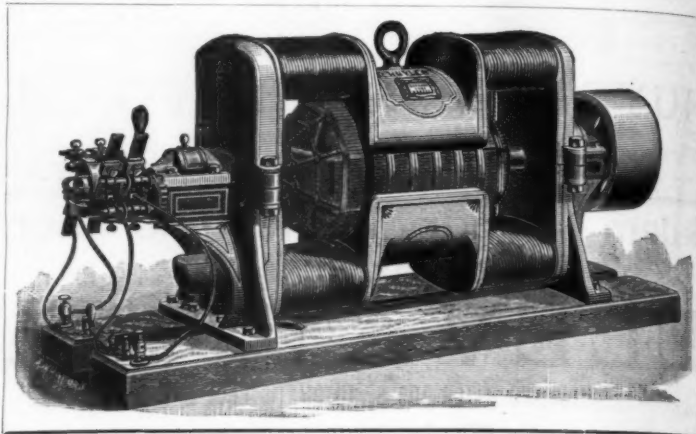
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OF

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**DYNAMOS**

OF THE HIGHEST ECONOMY AND DURABILITY.

BY

TRANSFORMERS AND LAMPS

OF UNEQUALLED EFFICIENCY.

**Alternating Currents.**

Minor Appliances of the Same Quality as the Larger Apparatus.

Intending Investors Should Investigate this System. A Slight EXAMINATION will SHOW that all CLAIMS can easily be SUBSTANTIATED.  
Send for Illustrated Catalogue on the Alternating Current System.

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OUR OWN SHOPS.  
MACHINES CARRIED IN STOCK  
AND ORDERS  
PROMPTLY EXECUTED.



The Improved Arctic with Corliss Engine.

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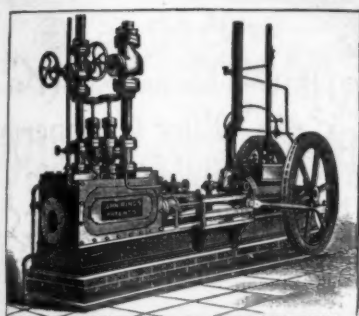
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Boilers, Tanks, Smoke Stacks, Shafting, Hangers, Pulleys,  
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**GOLD MINING AND STONE-WORKING MACHINERY.**

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Sizes 5 tons and upwards to 100 tons.

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Uses but 210 degrees of heat in the retort, saving all the water for cooling the gas and the weak liquor from 320 degrees down to 210 degrees, and uses none for the absorber. Small machines are complete on heavy-cast foundation plate. Automatic in operation. **Warranted High-Class and Positive.** Hotels, creameries, &c., can make their own ice or refrigerate without additional help. Sizes 500 pounds to 10 tons per 24 hours.

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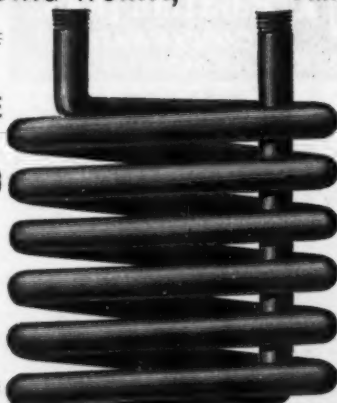
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WROUGHT IRON PIPE  
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MACHINES,  
CHEMICAL WORKS,  
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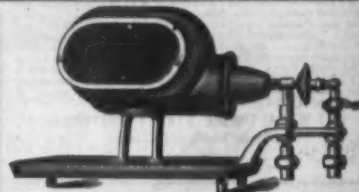
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Economical and reliable. Always ready for use.  
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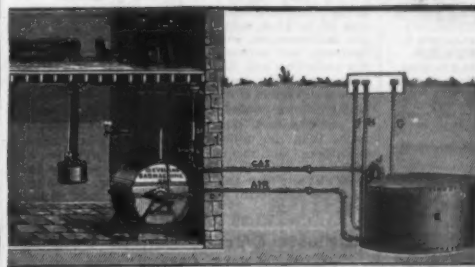
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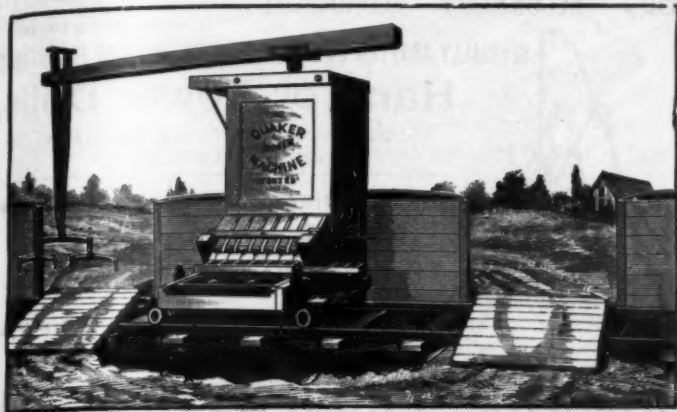
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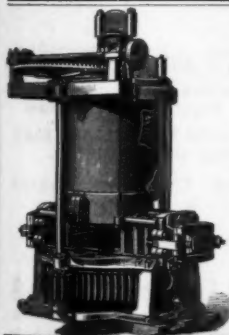
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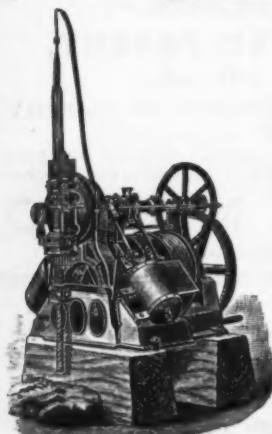
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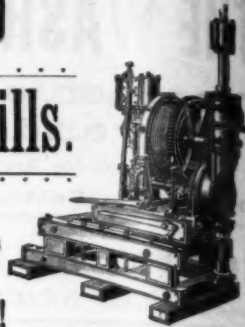
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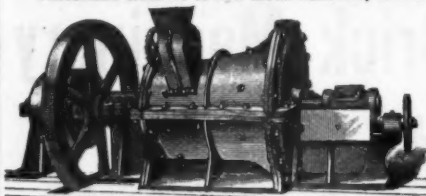
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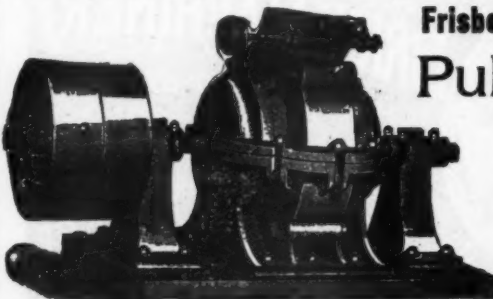
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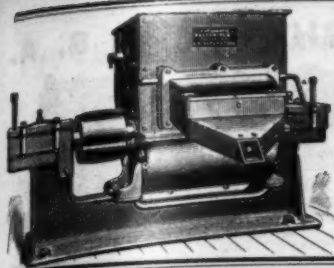
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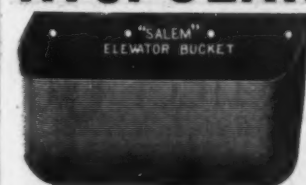
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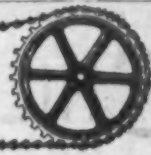
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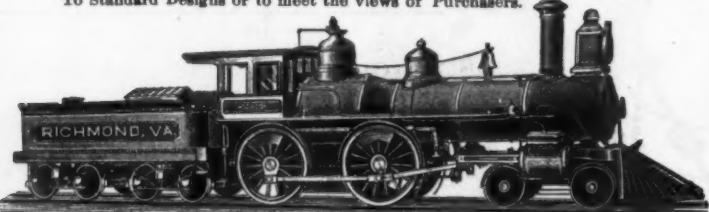
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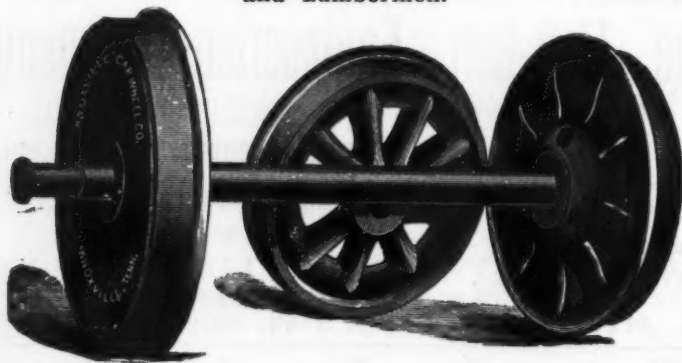
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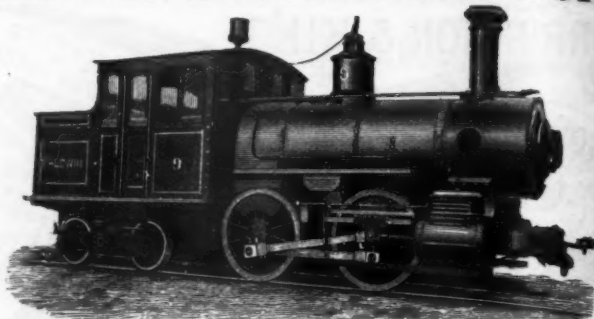
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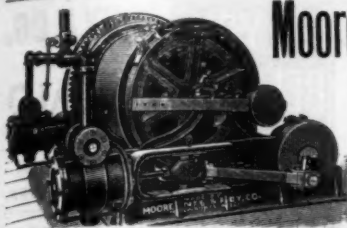
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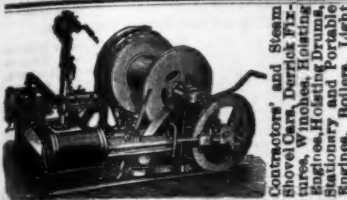
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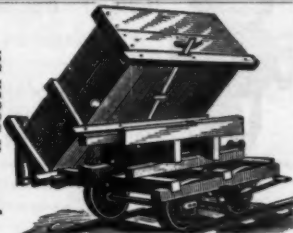
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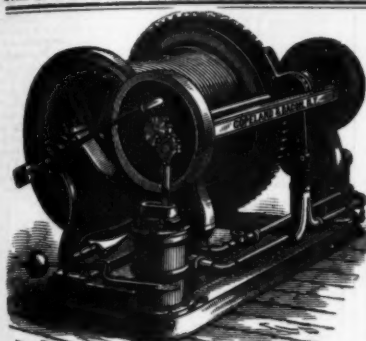
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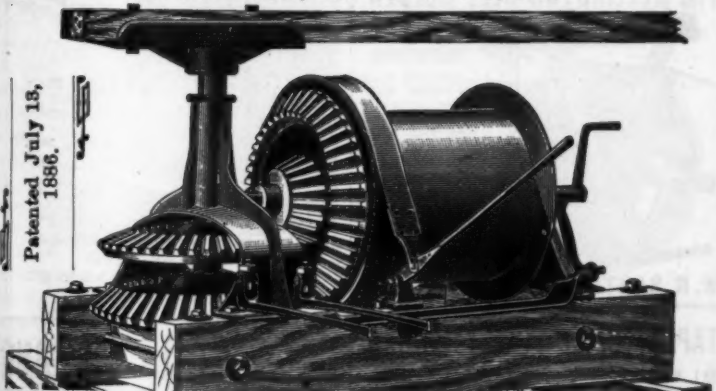
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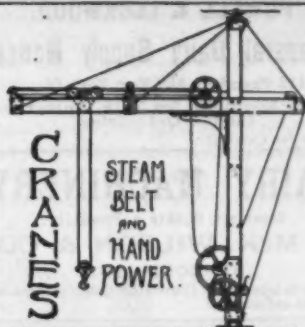
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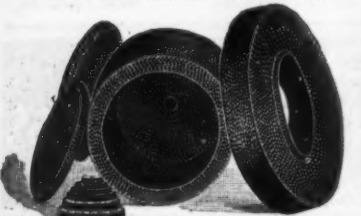
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### The Giant Key-Seater.

This machine consists of an upright column supporting on trunnions a table in which are "T" slots for securing the work to be operated upon.

Inside the column is a vertical guide, accurately scraped and fitted, on which slides the cross-head, having in its face a

always bears the same relation to the line of motion of cutter, the taper remains uniform regardless of any change in depth of cut, or length of hub. A graduation on side of table, over the feed lever, denotes the taper in fractions of an inch to the foot. Adjustable stops are provided, to which the feed lever is advanced, which enable the operator to cast any number of

necessary, except the cutter, which, for rack cutting, is furnished for any pitch desired. The graduations on dial read to 1-1,000 of an inch. The screw is 1 inch in diameter, and is provided with sectional bronze nut for adjustment for wear.

The "T" slots for clamping work is milled in the solid metal.

The manufacturers also furnish a key-

It does not "trap" off the water into some drain to be wasted, or into a tank to again be pumped into the boiler, but it takes the water directly from the heating coils, whether at a point above or below the boiler is of no consequence, and returns it without loss to the boiler, at a temperature of over 200° Fahrenheit, effecting thereby alone a great saving in the cost of fuel, besides the great advantage of keeping the boiler fed with the pure water.

This trap is connected with a great many paper machines, hot blast heaters, dry-kilns, brewers' kettles, etc., and in every case proves a grand success.

The makers guarantee this machine, providing it is connected according to directions, to take the condensation from paper machines, hot blast heaters, dry-kilns, steam pipes, radiators, etc., and return it direct back to the boiler, whether live steam or exhaust steam is used, regardless of steam pressure on boiler.

The cut is explained as follows: Trap for returning water direct to the boiler; to accomplish this the trap is located at point above the water level. D is steam pipe leading from dome of boiler connecting

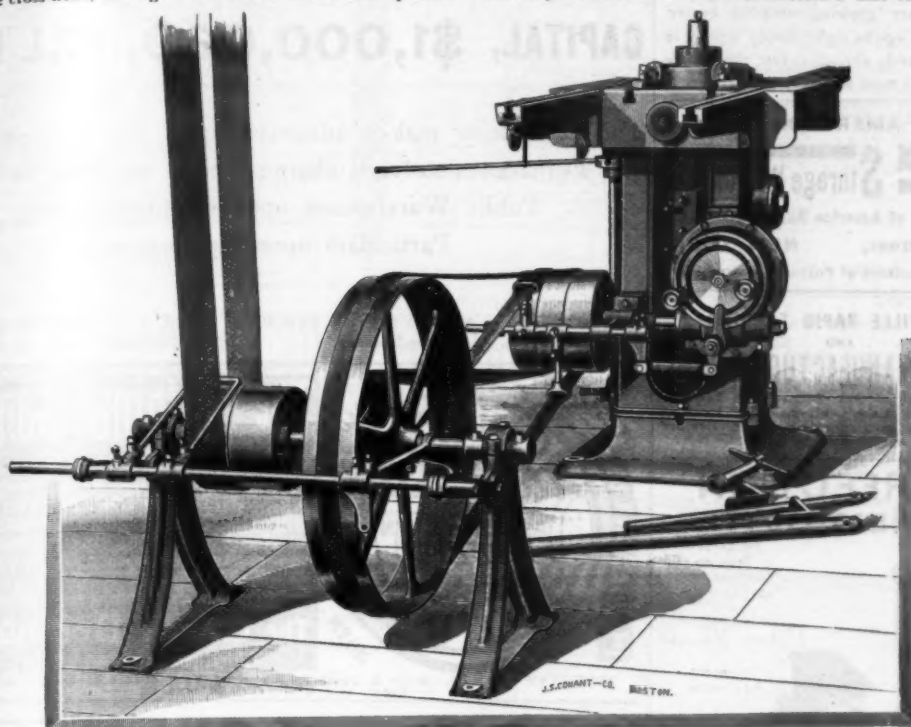


FIG. 1.—THE GIANT KEY-SEATER.

"V" groove for centering the round tool-bar, which is clamped securely by two steel clamps on studs, similar to the binders, usually employed on planers, shapers, etc.

This cross-head is fitted with bronze gibs for adjustment for wear, and receives its motion through a rack secured to one side, which meshes in a spur gear of wider face than the rack.

This spur gear is keyed on a horizontal shaft, to which is also keyed the worm gear inside of gear casing, the shaft extending through the casing, and having secured to it a disk which has two circular "T" slots turned in its face, in each of which is a tappet, which reverse the motion by shifting the open and crossed belts running from countershaft, as shown. A "quick return" motion is obtained by the different size of pulleys on countershaft; equal rapidity of movement of shifters is secured by placing the tappet, which acts at the end of the slow or cutting stroke, in the outer of the two circular "T" slots in disk, where it not only has a more rapid motion, but it acts upon the shifting lever nearer its center. By moving the tappets in the slots, the stroke of cutter can be varied as desired, without stopping the machine.

To provide for forward movement of cutter in the work, the vertical guide is arranged to slide in ways at top and bottom, being moved forward and back by wedges, which are operated by the feed lever shown at left of machine. As the cutter, cutter bar and guide are advanced the rack on cross-head slides in the cogs of the spur gear with which it meshes, the pinion having a wider face than the rack, as stated above.

The cutter bar, in which the cutters are secured, is round steel, and has a backing at surface of table which prevents spring, both back and sidewise, and the cutters are of such shape as to be ground without altering size.

The table can be inclined in either direction to produce taper key-seats, and as the inclination of the table, when set,

key-seats of the same depth, the depth being shown by a scale reading to 1-64 of an inch.

The loose pulleys are bushed with brass, and all boxes lined with babbitt. Angle plates are provided for readily centering and securing work to table.

Extension arms are furnished for increasing the size of table for work of large diameter, and each machine is furnished with full line of cutters, countershafts, wrenches, etc.

The sizes and capacities range from No. 1 machine, which cuts key-seats from the smallest ever used to 1½ inches wide and 10 inches long, to No. 5, which cuts key-seats from the smallest ever used to 3½ inches wide and 30 inches long.

As illustrating the rapidity with which work can be done with these machines, a statement is made that key-seats 1 inch wide by 6 inches long have been frequently cut in 3 to 4 minutes, and 1¼ inch wide by 12 inches long in 12 minutes, as accu-

making attachment, by means of which machine keys are made, either gib, plain, straight, taper or hollow, from rough iron or steel at a small expense. The keys so made are accurate, will fit perfectly the key-seats cut on the machine, and any number may be made exactly alike.

The attachment is put on or taken off in a few moments, and the same cutters are used for keys that are used for key-seats. A plain taper key, 6 inches long, ½ inch wide, is made in four minutes. A gib key of the same size can be made in from eight to ten minutes.

The Giant Key-Seater Co., Saginaw, E. S., Mich., are the manufacturers.

### The Morehead Steam Trap.

This steam trap is something comparatively new, and steam users will find it of interest to examine its details. The manufacturers have implicit confidence in it, and claim for it absolute reliability and a



THE MOREHEAD STEAM TRAP.

with the inlet pipe between check valve F and inlet chamber. F and F2 are check valves located in the inlet and outlet pipes. When the trap has filled sufficient to the tilt or dump, in doing so the valve D opens, admitting steam from boiler to top of the water, closing check valve F, and forces water through outlet pipe past the check valve F2 into the boiler, until the water is out sufficient to allow the trap to resume its normal position, when the valve D closes and the boiler pressure closes check valve F2, and return pressure opens check valve F, and the trap refills.

The trap for discharging condensation to tank depends mainly on gravity, and is said to be the only gravity trap made.

It works principally on the weight of water it receives, the varying of steam pressures being of no consequence because the trap tilts over one-third before it strikes the valve-lever, therefore overcoming the pressure on the valve.

The trap does not depend on the operation of a float or a soapstone, which is at any time liable to collapse or sink, or on contraction and expansion.

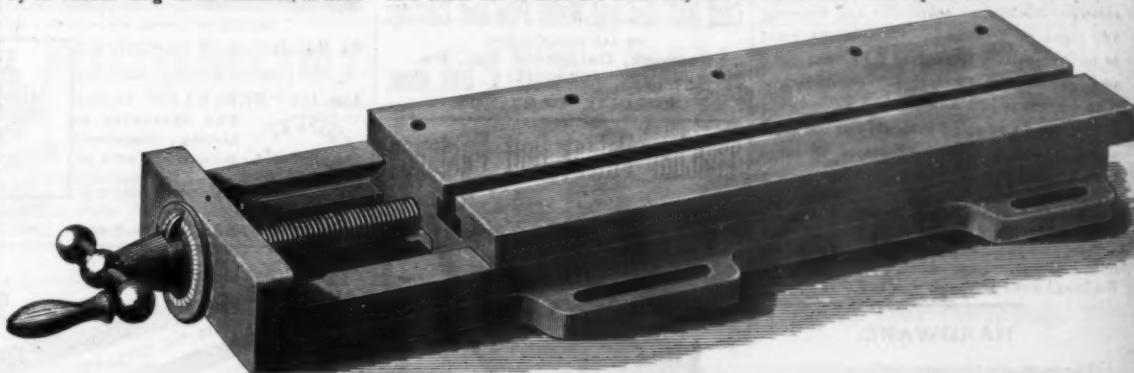


FIG. 2.—RACK CUTTING ATTACHMENT.

ately and exactly as any work can be done upon a planer.

The rack-cutting attachment, represented by Fig. 2, is a valuable addition to this machine, and is adapted to cutting racks of any length, pitch or face not exceeding the stroke of machine.

It can be placed on machine for use in a few moments, and no change of same is

great saver of fuel.

The qualifications advanced for the Morehead trap are—

First—Its simplicity.

Second—Its construction, which is of steel.

Third—It has no rubber joints.

Fourth—It has but one valve, which is on the outside.

The Hayett & Smith Manufacturing Co., of Detroit, Mich., manufacturers of this machine, have many commendatory letters testifying to all the assertions they make, and showing that their confidence is based on not only sound scientific principles, but also on practical demonstration. Prices and any additional information desired can be had on application to the company.

## The Markets.

OFFICE MANUFACTURERS' RECORD,  
BALTIMORE, November 12, 1890.

The iron trade neither expands nor contracts, taking it at large throughout the country. Prices preserve a general uniformity. Buyers are unable to see much advantage in making purchases at present for future delivery, except such purchases as are necessary to cover work in hand. All manufacturers whose opinions can be obtained express every confidence in the stability of prices and in the continuance of a heavy demand. There is no evidence as yet in trade centers that buyers have taken the recent election to heart. In some quarters the prediction was made that demand would fall off, but the prediction is not likely to be fulfilled for some time to come. Politics may not wear out, but iron and steel do. Capitalists do not seem concerned, so far as opinions have been expressed, and are likely to continue to make their investments with the same liberal hand in the future as in the past. Some of the new furnace companies are creating a little uneasiness in some Northern markets in their efforts to get a foothold, and sales have taken place in some instances at figures that would otherwise argue a weakness. Forge is moving at \$14 for cinder to \$15.50 for standard makes. No. 2 run; all the way from \$16 to \$17, and No. 1 from \$17.50 for Southern to \$18.50 for Pennsylvania. Ohio irons are selling well, and charcoal irons especially are in active request, particularly in the West. Eastern muck iron makers are receiving large orders at \$29.50 to \$30. Steel billets are selling at \$30 to \$31 East; nail slabs \$30 East. Finished irons are 1.75 to 2 cts. for merchant bar and 2 to 3 cts. for plate, according to shape. Structural mills are all well fixed for business, but large buyers have had intimations that certain large orders to be placed soon can be placed at more advantageous rates than have heretofore been made. Steel makers have a good volume of business on hand, and steel rail makers are securing large orders for the winter, one authority having put the figures of probable sales within the next few days near 100,000 tons at all mills. Buyers all around cling to the notion that in some way prices may decline, and hence they do not order quite as freely as they would otherwise do. Sales have been made within a few days that look like a weakening on the part of certain manufacturers. Western markets are more active than Eastern, because of the greater variety of material wanted. Southern iron markets are quiet but very strong, considering the rumors rife of the possibility of production exceeding consumption. None of the stronger Southern companies are showing any signs of weakness. Complaints exist as to the scarcity of cars for iron, coal, coke and general heavy freight requirements. The market is just now in such a condition that it can be affected favorably or unfavorably by slight causes. Rumors of large recent sales at low prices certainly have a disturbing influence, but, on the other hand, an immense amount of business is done at full prices. The coal trade is very active, and the demand for coke is equal to over output. Last week's Pennsylvania Railroad coke tonnage was 108,000 tons.

### HARDWARE.

The market continues without important changes, either in volume or values. The general demand is quite up to the average for the season, and the feeling in regard to

the future is satisfactory. Prices remain firm, with prospects of some advance in the near future evidenced by the indisposition of some manufacturers to accept orders for future delivery at present prices. Locks, which have been extremely low for several years, will likely be one of the first articles to advance, and a notice of such change would not surprise us at any time. Collections are growing steadily better, notwithstanding the tight money market in New York and abroad. On the whole conditions are most satisfactory.

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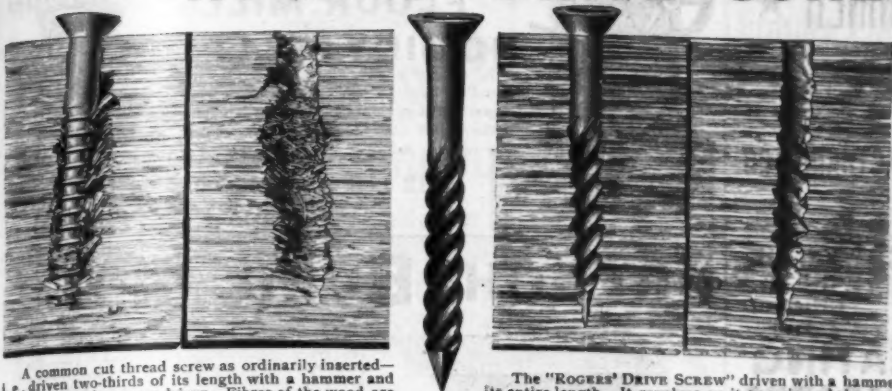
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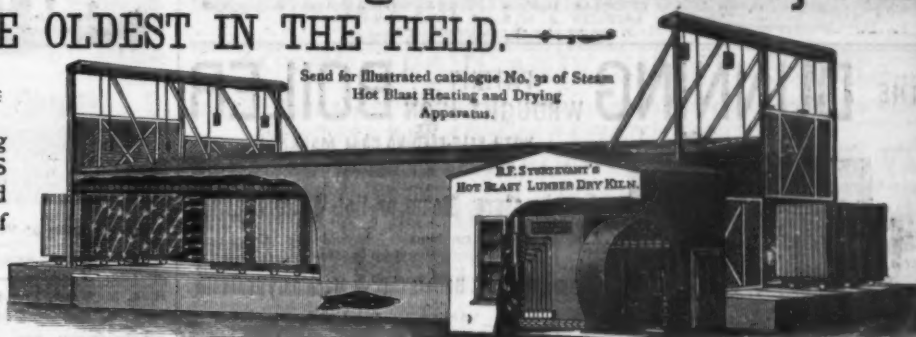


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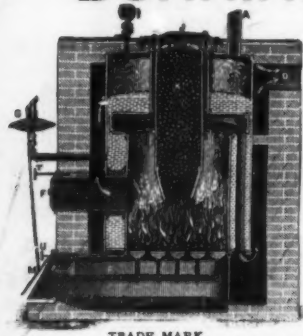
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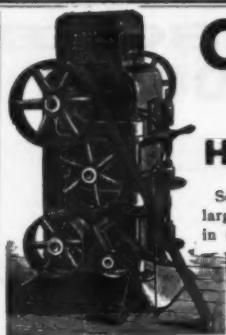
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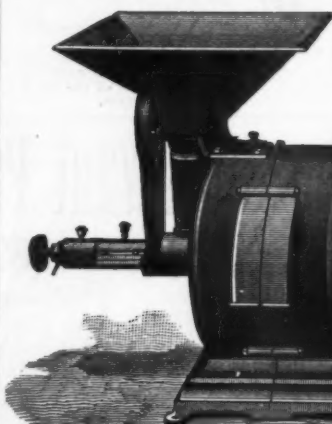
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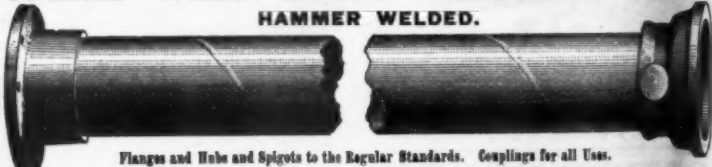
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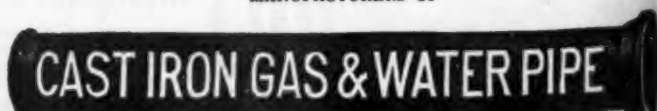
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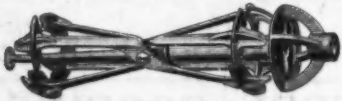
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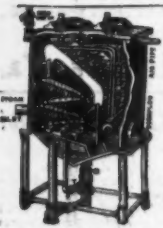
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is the best in the market. Why? Because the ends are protected from breakage by the button; its native flexibility entirely supercedes the old springs; the only cleaner with a follower to remove the refuse. Quicker and more easily adjusted than any other; better made; does better work; lasts longer.

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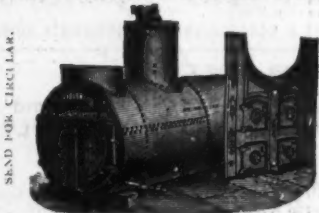
**"VACUUM" EXHAUST STEAM ECONOMIZER**  
Is a Feed Water Heater and Purifier.



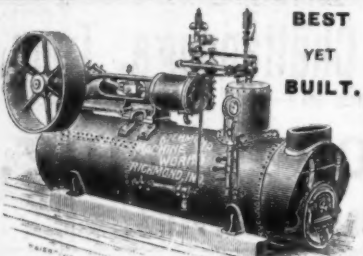
And is the most perfect device known for heating and purifying the feed water for steam boilers, preventing scale, and for heating buildings of any description, without back pressure on engines, returning condensation to the boiler in the one apparatus. Readily cleaned without stopping machinery. All parts accessible. Furnished on Trial for Acceptance. New Illustrated Catalogue of convincing proof, free.

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Boilers, Stacks, Tanks and Sheet Iron Works.  
Steam Fittings of all Kinds.  
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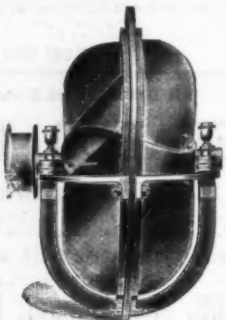
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Having specified Martin's Floor Plate and Bolt for Sliding Doors for numerous buildings erected under my supervision, I can safely recommend them for the use of steady and securing the doors.

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TROY, N. Y., October 14, 1889.  
I have specified the E. W. Martin Foot Bolt for hanging Sliding Doors, and earnestly recommend their use for the purpose.

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7x3 1/4	1 1/2	5 1/2	6 1/2	5 1/2	6 1/2
7x3 1/4	1 1/2	6 1/2	7 1/2	6 1/2	7 1/2
8x3 1/4	1 1/2	7 1/2	8 1/2	7 1/2	8 1/2
8x3 1/4	1 1/2	8 1/2	9 1/2	8 1/2	9 1/2
9x3 1/4	1 1/2	9 1/2	10 1/2	9 1/2	10 1/2
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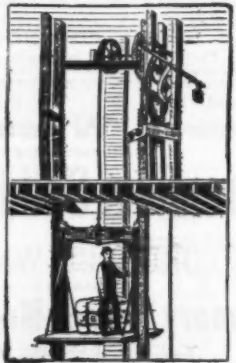
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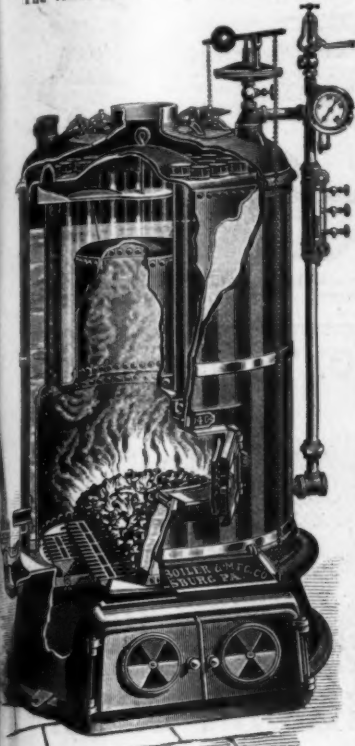
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The Harrisburg Boiler & Manufacturing Co. is meeting with much success in the placing of its Star gas burner, steam and hot water heating boiler on the market. The favorable reception it is receiving is attributed to the attention devoted to its construction. The materials are carefully selected and put in shape by skilled workmen under the supervision of experienced mechanics. C. H. No. 1 iron or steel boiler plate is used, according to the preference of the purchaser, the heads are flanged steel or iron, and the tubes are best charcoal iron boiler tubes. The heating surfaces are direct, and, being vertical, are pointed to as an important advantage. The tubes are directly over the fire, will



THE STAR GAS BURNER.

not readily close up and are not in excess of the requirements for draft in slow combustion. The gas chamber extends the fire surface in the gas fire-box, taking up the gases directly over the fire and consuming the greater portion of them, using the fuel economically. The mounting, fixtures, etc., of this boiler have some advantageous features. The base is fitted with independent draft doors and has improved shaking grate so arranged that when necessary it can be quickly removed. The boilers are furnished, when desired, with galvanized iron jackets, which prevent the radiation of heat in the cellar excepting at the top and from the smoke pipe or the steam pipes if not properly covered. Each boiler is fully tested before being sent out of the factory. Further particulars will be cheerfully given on addressing the manufacturers at Harrisburg, Pa.

### TRADE NOTES.

RYRAM & Co., Detroit, Mich., manufacturers of the Colliau patent cupola furnace, received orders during the month of October for 17 of these furnaces, having a daily melting capacity of 664 tons.

The machine keys manufactured by the key department of the Sandwich Manufacturing Co., of Sandwich, Ill., are guaranteed to be better than hand-made keys, and cost the buyers less than one-half as much as hand made keys. The above company make a specialty of this article, so necessary to all machinery manufacturers, and their improved automatic machines turn out an article free from hammer marks and which have a perfect uniformity in

taper. The latest price-list will be sent to all who apply.

THE Detroit Heating & Lighting Co., Detroit, Mich., claims the largest hot-water contract of the season in the one just secured by that company for equipping St. Anthony's Hospital, Columbus, Ohio, requiring about 15,000 feet of radiation. On this job will be used for the first time the new extra large Bolton heater.

THE following testimonial from a Florida saw-mill concern to A. H. Andrews, of Chicago, Ill., speaks in highest terms of the Andrews dry-kiln after two years of constant use:

"ESCAMBIA MILLS, ESCAMBIA, FLA., }  
March 10, 1890. }

A. H. ANDREWS, Chicago, Ill.:

Dear Sir—Being in the market, we made an extensive examination of the different dry-kilns in use, and accidentally were directed to a kiln you were using in Chicago. The cheapness and sound philosophy of its construction and its safety from fire all impressed us with its practicability, and we concluded to purchase two kilns of 32 M capacity each. After nearly two years of constant use, we find our yellow pine sap lumber weighs about 5½ pounds to the foot in the rough; after being in kiln about 48 hours it weighs not to exceed 3 pounds. The lumber is not checked and it comes out bright and handsome. The steam used is very small, while the results are beyond our expectations. We are, yours truly,

SKINNER & McDAVID."

Lumber-mill owners who are not familiar with the principle of this popular "dryer" can secure an illustrated descriptive circular by addressing the manufacturer.

### Literary Notes.

THE CENTURY MAGAZINE begins its annual volume with the November number. The leading attractions in the way of solid reading for the coming year are to be "The Gold Hunters of California," the narrative of an American's travels through Thibet (700 miles of which were over ground never before visited by a Caucasian), and a series of descriptions of American newspapers written by well-known journalists. Among the light reading will be a novel by Edward Eggleston, "The Faith Doctor." Published by The Century Co., 33 East 17th street, New York.

THE POPULAR SCIENCE MONTHLY has gained a place among periodicals occupied by no other. Among the announcements for 1891 is a series of copiously illustrated articles on "The Development of American Industries since Columbus," in which the progress of iron and steel making, of the cotton manufacture, and of the woolen, glass, leather, and other leading industries will be described by writers of long practical acquaintance with their respective subjects. The series begins in the issue for December, 1890, (the second number of volume 38), with an account of the "First Steps in Iron-Making" in the colonies, written by Mr. W. F. Durfee, of Pennsylvania. The full prospectus of the Monthly for the coming year will be printed in the same number. Dr. Andrew D. White's "New Chapters in the Warfare of Science" will be continued, and other articles bearing upon the advances of science and upon questions of the day are promised.



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They will run for years without oil. Perfectly clean. No cutting or danger of fire from overheating. Send for New Circular of interest to users of Loose Pulleys.  
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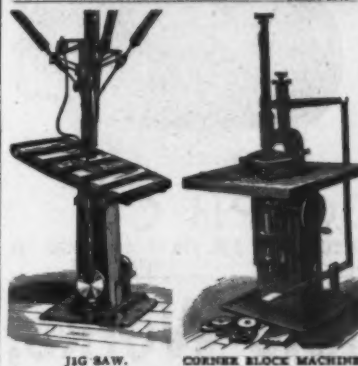
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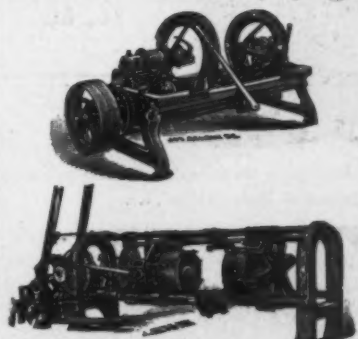


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Makers of the strongest R. R. Track Scale in the world.



### The Spragg Automatic BRAKE HOIST



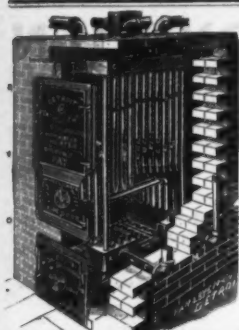
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I Hurt my Hand with a Nail Puller.  
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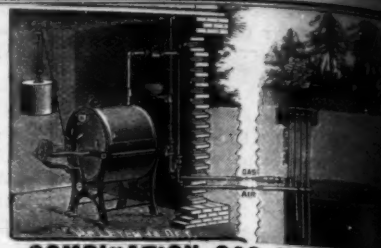
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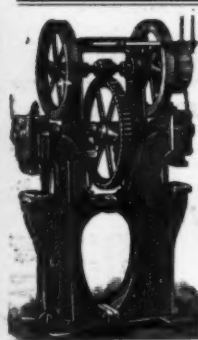
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Best Independent Lighting Apparatus for Country and Suburban Residences, Churches, Schools, Stores, Hotels, etc. Over 20 years in use with never an accident. Average cost of gas 1/2 cent per hour per burner.



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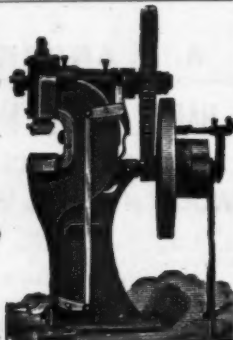
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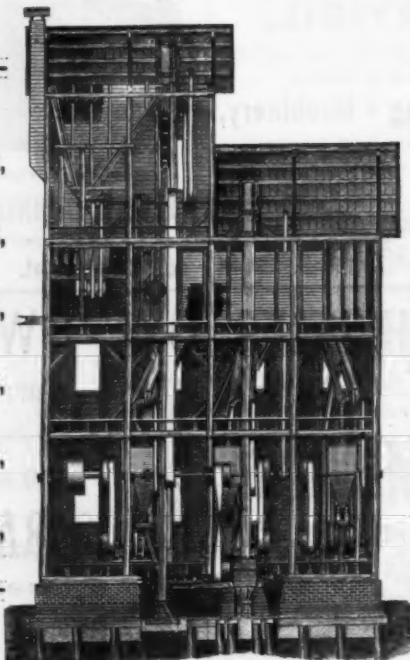
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Write for our Catalogue and Price-List. Please mention this paper.

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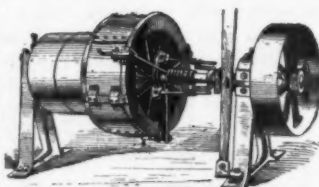
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XUM

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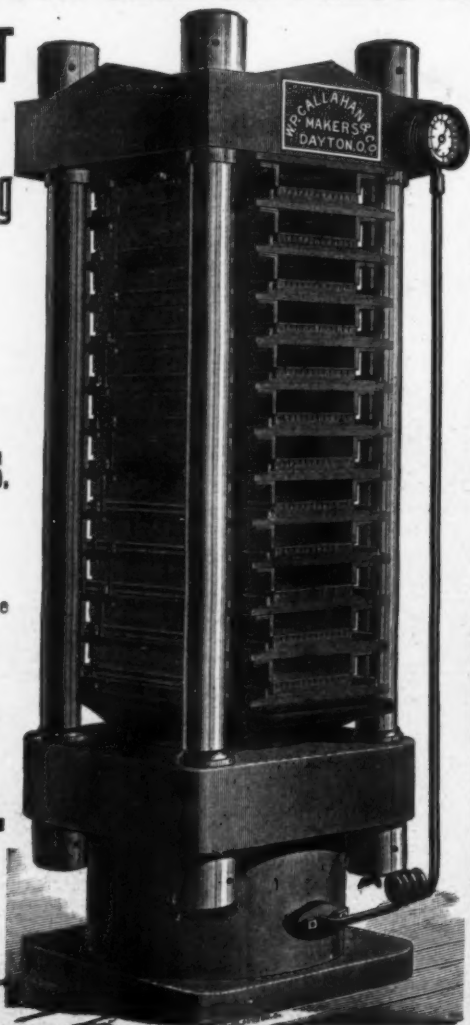
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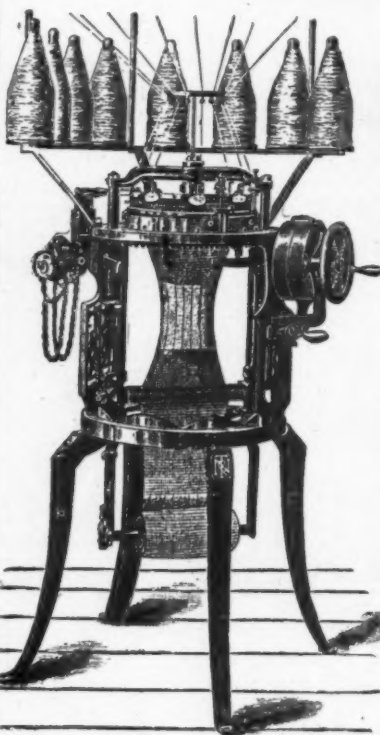
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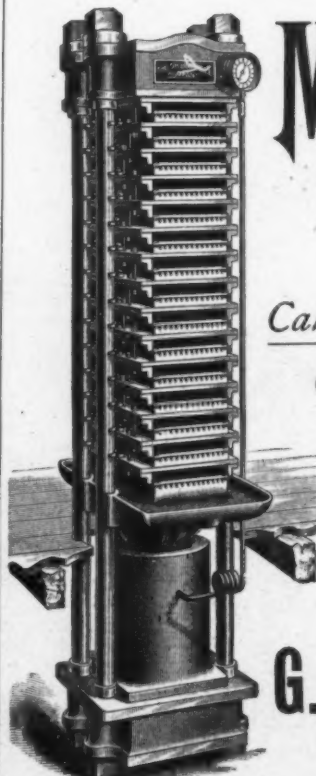
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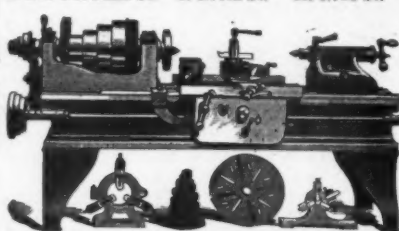
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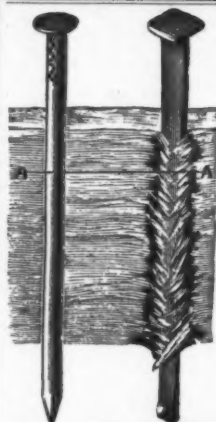


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